

GLOBAL

GLOBAL OVM 020

Hightspeed, 2 thread, flat overedging machine for stitching
a flat finish edge on emblems and patches.

INSTRUCTION / OPERATING MANUAL
PARTS MANUAL

MACHINE SET-UP AND OPERATIONS

機器設置和操作

OUT OF THE BOX 拆開箱子

- 1) Upon removing the machine from its box observe its threading carefully and compare it with the threading diagram supplied with the machine. Keep this threading diagram for future reference. The matter of threading is very important and if difficulty arises, the threading of the machine should be compared with the individual diagram supplied. Threading is simple, but it must be accurate.

將機器從機箱中取出後，仔細觀察其穿線方式，是否符合隨機提供的穿線圖 (P12)。

保留此穿線圖以備將來參考，穿線方式很重要，如出現問題，機器的穿線方式應與穿線圖表做比較。穿線很簡單，但必須準確。

- 2) Secure the machine mounting assembly to the table with the 3 screws provided. The assembly must be:
 - A. Parallel with the center line of the motor.
 - B. When the machine is set on the assembly, the front of the machine will be three or four inches back from the front of the table with its hand wheel to the right of the operator.
 - C. The hand wheel belt groove should line up with the motor pulley groove, when the motor pulley is in the running position.

使用提供的三個螺絲將機器安裝組件固定到工作台上，組裝必須：

- (A) 與電機的中心線平行
- (B) 當機器設置在組件上時，機器的前部將距離桌子前方 3 或 4 英寸，其手輪在操作員的右側。
- (C) 當電機滑輪運行時，手輪皮帶槽應與電機滑輪槽對齊。

- 3) Check the Hand Wheel (belt) Guard to be sure it does not hit the belt. Adjust if necessary; by removing screw, repositioning, and replacing screw

檢查手輪 (皮帶) 防護罩，確保其沒有撞到皮帶，必要時進行調整 (拆下螺絲，重新定位，再安裝螺絲)

- 4) Assemble thread stand and screw its base to the table at the rear of the machine.

組裝線架，將基座鎖到機器後部的桌子上。

- 5) The thread guides at the top of the thread stand should be directly over the center of the cones of thread.

線架頂部的過線桿應在線錐中心的正上方。

- 6) The thread or yarn should be wound on cones, which should stand vertically. The thread from these cones should lead up to the Safety Cross Rod (8-52-J) through the thread eyes and diagonally downward to the machine.

Note: Care should be taken to be sure the threads are far enough apart so that they will not whip together when the machine is running at speed.

線或紗線應纏繞在線錐上，該線錐應垂直放置。來自這些線錐的紗線應穿過線架上過線桿的線孔，並斜著向下到機器。注意：應該注意確保線與線相隔甚遠，以便在機器高速運轉時不會纏繞在一起。

- 7) Be sure the thread will come off the cones readily, with uniform tension and that it cannot catch under the cone or elsewhere along its path.

確保線將以均勻的張力輕鬆脫離線錐，並且不能被夾在線錐或其他地方。

- 8) Since the oil has been drained from the machine before shipping, the main reservoir must be filled before the machine is used. (Note section 15)

油料在機器運送前將會被排掉，所以在使用機器前必須添加新的針車油。

SPEED 速度

- 9) The machine is designed to run at maximum speed of 5500 stitches per minute. Some work is efficiently handled at 5500 stitches per minute but it has been found that maximum efficiency for some operations is attained at a speed of about 5000 stitches per minute.

益多利機器的設計運行轉速為 5500 SPM。有些操作能以 5500 RPM 高效運行，但某些操作的最大效率是以 5000 RPM 的轉速達到的。

MOTOR 馬達

- 10) To obtain full efficiency the motor must be kept in good operating condition in order to start and stop the machine with minimum delay. Every attempt should be made to avoid driving the hand wheel from an oversize pulley, especially when the centers of both pulleys are relatively close together. Failure to avoid this situation can result in belt slippage and less control of starting and stopping the machine.

為了獲得充分的效率，馬達必須保持在良好的運行狀態，以便立即啟動和停止機器。應盡量避免將手輪從超大的皮帶輪上驅動，特別是當兩個皮帶輪的中心相對靠近時。如果沒有避免這種情況，可能會導致皮帶打滑，減少啟動和停止機器的控制。

- 11) A V-Belt Hand Wheel with an effective pitch diameter of 2 1/8" is supplied with each machine. A standard 3/8" endless V-Belt is recommended to connect the Hand Wheel to the motor pulley.

隨每台機器提供一個有效節徑為 2-1/8 的三角皮帶輪。推薦使用標準的 3/8 環型三角皮帶將皮帶輪連接到電機皮帶輪。

- 12) The top of the hand wheel must turn away from the operator. The machine sews with clockwise rotation only (when viewed from the Hand Wheel).

手輪的頂部必須遠離操作員。機器僅以順時針旋轉縫製（從手輪上看）。

NEEDLE 針

- 1) Set the Needle into the Needle Carrier Assembly so that the end of the shank of the Needle is in contact with the Stop Pin L3660, and tighten the Nut L43-16 with the socket wrench firmly. The beveled portion of this Nut L43-16 should be against the recess provided in the N.C. Collar.

NOTE: The Nut L43-16 should only be loosened to change the Needle; it does not have to be removed.

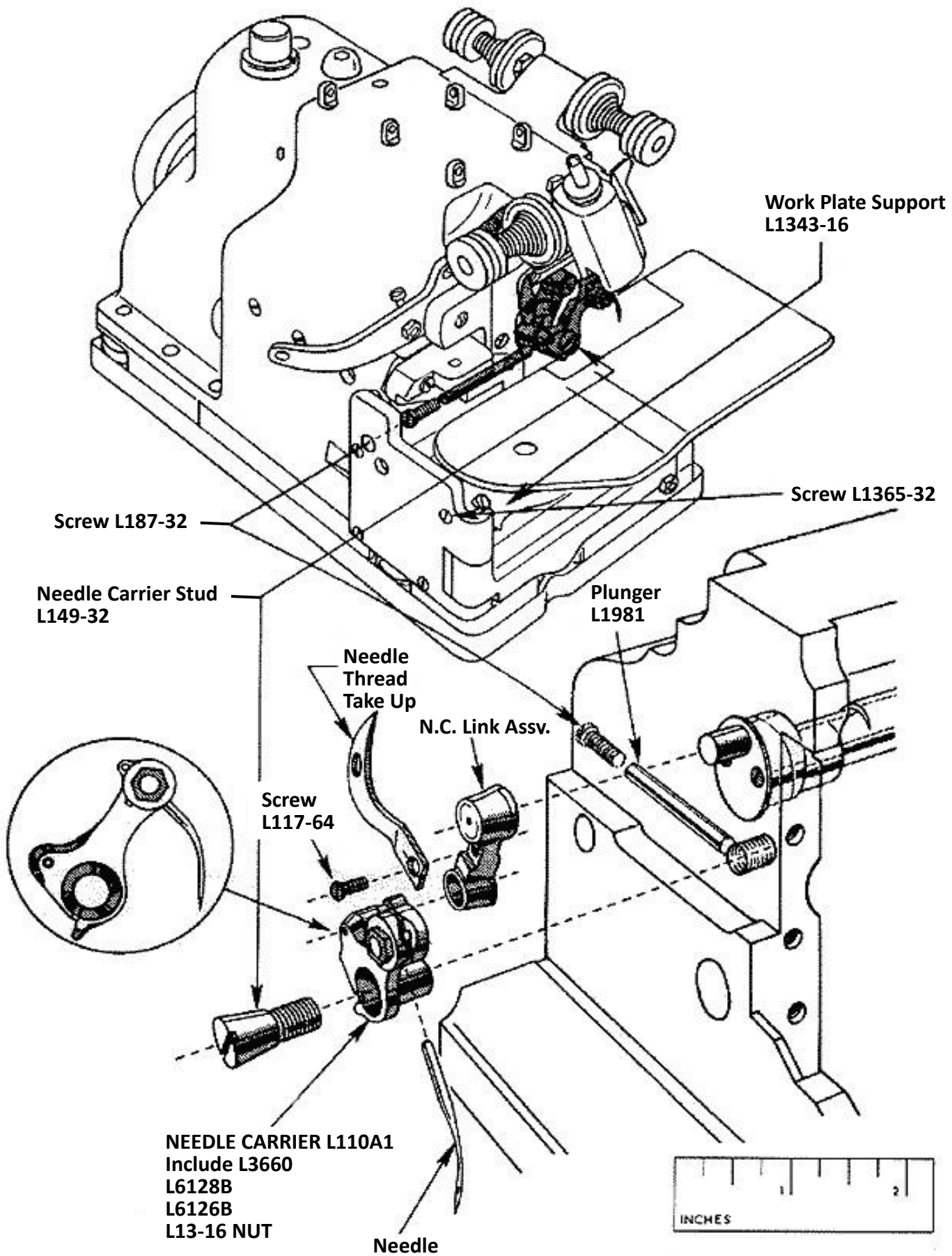
將針插入針柱，使針的桿端與定位銷 L3660 接觸，用套筒扳手擰緊螺母 L43-16。螺母 L43-16 的斜面應該靠在針柱的凹槽中。注意：換針時，螺母 L43-16 只要鬆開，不必拆掉。

- 2) A Needle as large as is practical for the work being accomplished should be used, but care should be taken that the needle slot in the Needle Plate is large enough to fit the Needle.

應使用適合操作的車針，但必須確保針板上的針槽夠寬。

- 3) Self-setting needles, marked with the size number and letter "D", used IDL0-30 and IDL-30 machines are available in the following sizes: (from smallest to largest) Nos. 000D, 00D, 0D, 1D, 2D, 3D, 4D, 5D, 6D, 7D, AND 8D. Special needles in some of the above sizes are available for special uses.

在 IDL-30 機器上使用的針，標有尺寸編號和字母 "D"，可以按以下尺寸提供：（從最小到最大）000D, 00D, 0D, 1D, 2D, 3D, 4D, 5D, 6D, 7D, AND 8D。以上尺寸的特殊針可用於特殊用途。



NEEDLE CARRIER ASSEMBLY

NEEDLE CARRIER ASSEMBLY 針柱 整組

- 1) The Needle Carrier Assembly must be perfectly free to swing upon its stud, but must not have any right to left (lateral) movement. To adjust the Needle Carrier Assembly:
 - A. Remove the Upper Fabric Guard (screw L175-32) and the Work Plate Support (remove screws L1365-32 from Feed Cover Support and screws L1343-16 from Work Plate Support).

B. LOOSEN SET SCREW L187-32

NOTE: If loosening this screw is neglected, damage to the stud hole in the Frame will occur.

- C. Tighten the Needle Carrier Stud L149-32 until it stops then back it out 1/12 of a turn (30 degrees). Tighten Set Screw L187-32 and check Needle Carrier for lateral movement. Repeat this complete procedure as necessary until the Needle Carrier moves freely up and down, but has no lateral movement.

針柱組必須完全自由地在其螺栓上擺動，但不能從右向左橫向移動。調整針柱組：

- (A) 取下上護蓋 (L175-32 螺絲) 和面板台。(從進料蓋支架拆下 L175-32 螺絲，再從面板台拆下 L1343-16 螺絲)
- (B) 鬆開 L187-32 螺絲 注意：如果忽略鬆開螺絲，則會損壞機頭上的螺栓孔。
- (C) 擰緊針柱組上的 L149-32 螺栓直至其停止，然後將其迴轉 1/12 圈 (30 度)。擰緊 L187-32 固定螺絲並檢查針托架是否橫向移動。重複此步驟，直到針座上下自由移動，但沒有橫向移動。

NEEDLE PLATE 針板

- 1) Most edging, seaming and serging operations require a Needle Plate with a chaining finger the width of the stitch desired and sufficiently long to permit two or three stitches to be retained on the finger as goods are fed through the machine.

大多數包縫，縫合和包邊操作都需要一個帶有針板舌的針板 (針板舌寬度依縫樣而決定，且針板舌的長度需要夠長)，以便在布料縫紉時 允許 2 到 3 針的線保留在針板舌上。

- 2) A two-thread hemming operation usually requires a Needle Plate with a very short or “stub” finger. When such a Needle Plate is used, the changing finger is part of the presser foot finger.

雙線捲邊操作通常需要帶有短針板舌的針板，當使用這種針板時，出線舌是押腳舌的一部分。

- 3) The needle slot in the Needle Plate must always be large enough to permit the blade of the needle to pass freely. The edge of this slot should be smooth and slightly rounded. The chaining finger of the Needle Plate should be free of burrs.

針板上的針孔必須總是足夠大，以允許針能自由通過。這個孔的邊緣必須是光滑，略圓。針板的出線舌必須沒有毛刺。

- 4) The working surface of the Needle Plate should be corrugated for standard sewing with differential feed, and smooth for use on delicate fabrics requiring little differential.

針板的工作表面必須是波紋狀的 用於差動進給的標準縫紉，也必須要平滑 適用於需要微小差動的精緻面料上。

- 5) The Needle Plate must match the Feeding Parts.

針板必須與狗齒相匹配

NEEDLE CARRIER ASSEMBLY LOOPERS 針柱組彎針

MACHINE LOOPERS 機台彎針

- 6) The Upper and Lower Loper must cooperate with the Needle in order for sewing to occur. Before making any Loper adjustments, always change to a new Needle. A new Needle may solve your problem without further adjustments.

上下彎針必須與車針一起運行才能進行縫紉，在做任何彎針調整之前，總是要換新的針。使用新的針可能會解決你的問題，而無需進一步調整。

- 7) The Upper Loopers are made in two general forms, one for two thread stitching and the other for three thread stitching. Adjustment of both forms are the same.

上彎針一般有 2 種型式，一種是用於兩線縫合，另一種是用於三線縫合。這兩種類型的調整方式是相同的。

- 8) The Loopers are nearly self setting, but they may need slight bending to achieve proper setting. Always bend Loopers slightly farther than the position you desire. The Loopers have a tendency to spring back to their original (pre-bent) position, if you don't bend them far enough. Loopers are designed to be bent only in the shank area. The point areas are hardened to prevent wear, and do not take a bend well.

彎針幾乎是自行安裝的，但可能需要輕微地扳彎針才能達到適當的設置。始終將彎針扳到比所要求的位置稍微彎一些。如果不把彎針扳得足夠遠，它往往會回彈到原來(預彎)的位置。以彎針設計只能扳柄部。因彎針的其他關鍵區域被硬化以防止磨損，所以不容易被扳彎曲。

- 9) To bend the Loopers, we recommend Inderle Loper Bender L3010. Some people use the shank of a screwdriver, or pliers to do the bending. Please note: if pliers are used, they must be smooth surfaced to prevent damage to the surface of the Loopers. A good light is recommended for visibility when setting the Loopers. A piece of white paper placed behind the Loopers also makes them more visible.

要扳彎針，建議使用彎針扳手 L3010。有些人用螺絲起子或鉗子來扳彎針。如果使用鉗子，鉗子的表面必須光滑，以防止損傷彎針表面。安裝彎針時，建議使用良好的光線。將一張白紙放在彎針背後也會使它們更加明顯。

LOOPER SETTING 彎針安裝

The following instructions are designed to give you a general knowledge of Loper setting. You should be able to make the machine sew after following these instructions. Specific styles will require further “fine tuning” to get the ideal Loper setting. Talk to your local INDERLE sales representative for tips on setting your specific style of machine.

以下說明為彎針安裝的一般知識。你應該能夠按照這些說明使益多利 機台進行縫紉。特殊的規格將需要進一步的“微調”，以獲得理想的彎針安裝。與當地的益多利銷售商聯繫，獲取有關設置特定機器規格的提示。

- A) Swing the Presser Foot Assembly out, and remove the Needle Plate. Remove the Lower Loper Thread Tube, Feed Dogs, Fabric Guard (Upper), and Dust Shield for accessibility. Loosen Set Screws L117-32, L11003-16 and remove Loopers.

為便於使用目的，將壓腳組件移出，然後拆下針板。拆下下彎針線管，狗齒，護蓋(上)，保護蓋。鬆開固定螺絲 L117-32，L11003-16 並拆下彎針。

- B) Insert Lower Loper into the Lower Loper Carrier. Push it down until it stops. Tighten Set Screw L117-32 against the flat spot on the shank of the Loper.

NOTE: Before inserting new Looper, make sure the hole in the Looper Carrier and the area around it are clean. If you push the dirt into the hole, the Looper will stick out too far and become hard to adjust properly. If this has happened, remove the Frame Cap and clean out Looper Carriers from the opposite end with a wire or pipe cleaner

將下彎針插入彎針台 往下推直到停止 將固定螺絲 L117-32 緊固在彎針柄的平面上

注意: 在插入新的彎針之前, 確保彎針台的孔及其周圍是乾淨的。如果將污物推入孔中, 彎針會伸出太多而難以正確調整。如果發生這種情況, 請拆下前蓋, 並使用鐵絲從彎針台的另一端清理。

- C) Turn the Hand Wheel so that the Needle is at its furthest downward position (see diagram 1). The distance between the point of the Lower Looper and the Needle should be the thickness of the hook end of your INDERLE Tweezers L37225B, or about 1/32 of an inch (0.035). Refer to diagram A for bending the Lower Looper to this setting.

轉動手輪, 使針處於最下方的位置 (見圖 1)。下彎針尖與車針之間的距離應為 L37225B 鑷子的厚度, 或大約 1/32 英寸 0.035。請參考 A 圖, 將下彎針彎曲到此設置。

- D) The top corner of the needle point (where the point meets the blade) should contact the needle guard of the Lower Looper with a little pressure (see diagram 2). To gage this, turn the Hand Wheel to separate the Needle from the Lower Looper. Insert a small scrap piece of note paper (this is approximately 3 thousandths of an inch thick) between the Needle and Lower Looper. Turn the Hand Wheel back so that just the thickness of the paper is caught between the Needle and Looper. You should be able to remove the paper but you should feel a slight drag against it as you pull it out. Refer to diagram B for bending Lower Looper to this setting.

機針的針頭應該輕微的接觸下彎針上的導針斜面 (見 2 號圖), 轉動手輪將針頭與下彎針分開, 以便測量。在車針和下彎針之間插入一小塊廢紙 (厚度大約為千分之三英寸厚)。轉動手輪, 使紙張的厚度夾在針和彎針之間。轉動手輪, 使紙張的厚度夾在車針和彎針之間。你應該可以取出紙張, 但當你拔出紙張時, 你應該感覺到輕微的拖拽。要彎曲下彎針到這個設置請參考 B 圖。

- E) Turn the Hand Wheel slightly, until the point of the Lower Looper arrives behind the Needle. The point of the Lower Looper should contact the rear surface of the Needle, but it should not deflect the Needle (see diagram 3). The note-paper gage used above, also works here. If you are using “scarfed” Needle, the point of the Lower Looper should still contact, but not deflect the Needle. Generally, a Lower Looper is set tighter to a “scarfed” Needle than a standard Needle. Refer to diagram “E” to adjust the point of the Lower Looper to the Needle.

稍微轉動手輪, 直到下彎針針尖到達車針後面。下彎針的針尖應接觸到縫針的後面腹部, 但不能使針偏轉 (見圖 3)。上述的紙規也適用於此。如果您使用有凹槽的車針, 下彎針的尖端仍然必須接觸車針, 但不能使針偏轉。一般來說, 下彎針更緊密地設置在有凹槽的針勝過標準的針。參見圖 E, 將下彎針的尖端調整到車針上。

- F) Insert Upper Looper into the Upper Looper Carrier as far as it will go. Tighten Set Screw 100 3/16 against the flat spot on the shank of the Looper. (See note above in section “B”).

將上彎針盡可能深插入三叉內, 將固定螺絲鎖緊在彎針柄的平面上 (請參閱上文 B 節中的註釋)。

- G) Gently turn Hand Wheel over. The Upper Looper should be far enough back that the Needle passes just behind the head. It should also be far enough forward that its point passes through the scarf, just behind the eye of the Lower Looper. Look for interference (contact) between the Upper Looper and Needle, or the Upper Looper and Lower Looper. The Upper Looper should not contact either the Needle or Lower Looper. If there is contact, adjust the Upper Looper to clear the one it is contacting. If it is contacting both, adjust the Upper Looper to clear the one with the most interference first.

輕輕轉動手輪。上彎針必須足夠遠以便車針通過彎針後方。它的尖端也要足夠的往前，才能剛好通過下彎針孔後方的凹槽。檢查看上彎針和針頭之間，或上彎針和下彎針之間有沒有觸碰到。上彎針不能觸碰到車針或下彎針。如果有，必須調整上彎針使它遠離車針或下彎針。如果上彎針與車針和下彎針之間都會觸碰到，先調整上彎針使它不碰觸到機針。

- H) To adjust the clearance of the Upper Looter refer to bending diagrams "C" and "D". Moving the Upper Looter from path 1 to path 2 or 1 to 3 (diagram 4) will increase or decrease the clearance between the Upper Looter and the Needle. It will also do the opposite to the clearance between the Upper Looter and the Lower Looter. For example, if moving from path 1 to path 3 increases your clearance between the Upper and Lower Looter, it will also decrease your clearance between the Upper Looter and the Needle.

要調整上彎針的間隙，請參閱圖 C 和 D。將上彎針從路徑 1 移至路徑 2，或從路徑 1 至路徑 3 (見圖 4)，會增加或減少上彎針與車針之間的間隙。這樣做也會對上彎針和下彎針的間隙產生相反的效果。例如，如果從路徑 1 移動到路徑 3 則會增加上下彎針之間的間隙，同時也會減小上彎針和車針之間的間隙。

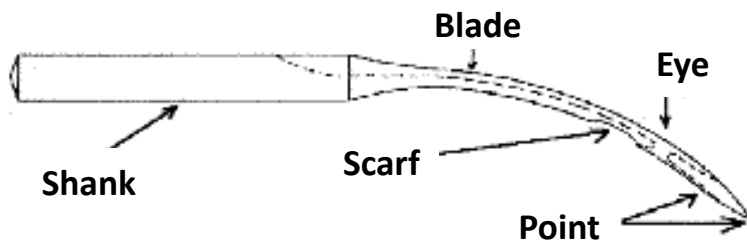
- I) Adjusting the Upper Looter (diagram 4) along path 1 through points A, B, C, D and E will change the clearance between the Upper Looter and the Needle (bending diagram C). Raising and lowering the Upper Looter affects the clearance by changing the timing of the meeting of the Upper Looter and the Needle. Bending the Upper Looter along this path will also change the meeting place of the point of the Upper Looter and the rear of the Lower Looter. The point of the Upper Looter should fall in the scarf of the Lower Looter right behind the eye See diagram 5 and 6. The point of the Upper Looter should not contact the Lower Looter. To determine if there is contact, place the tip of your left index finger on the exposed shank of the Lower Looter. Turn the Hand Wheel slowly while holding your finger to the Looter, if there is contact you will feel it. Adjust and recheck until the contact disappears.

沿路徑 1 通過點 A、B、C、D 和 E 調整上彎針 (圖 4) 將改變上彎針和車針之間的間隙 (圖 C)。升高和降低上彎針影響間隙是通過改變上彎針和針的接觸時機。沿著該路徑扳上彎針也將改變上彎針針尖和下彎針後部的接觸點。上彎針的尖端應該落在孔後面的下彎針的凹陷處 (見圖 5 和 6)。上彎針的尖端不應該接觸下彎針。要確定是否有接觸，請將左手食指的尖端放在下彎針的暴露柄上，慢慢轉動手輪，同時將手指握住彎針，如有接觸，你會感覺到。調整並重新檢查，直到沒有接觸。

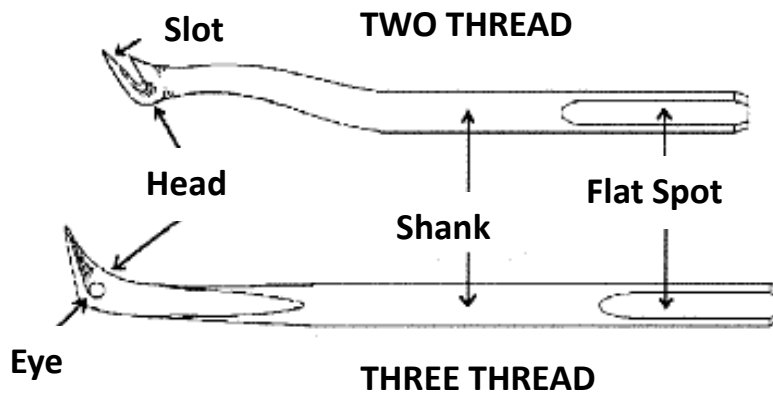
- J) At this point your Loopers should be reasonably set and working with each other and the Needle. Two more adjustments can be made, but they are generally not necessary. Diagram 8 shows the angle of the Lower Looter, this is pre-set at 3-1/2 degrees. Following bending diagram F, you can increase or decrease this angle to affect the clearance between the point of the Upper Looter and the rear of the Lower Looter. Diagram 7 shows rotating the head of the Upper Looter (bending diagram G or H). This maintains the clearance between the Needle and the Upper Looter, while bringing the point of the Upper Looter closer to or farther away from the Lower Looter.

此時，應該已合理的設置所有彎針並與車針互相配合。還可做 2 個更多的調整，但通常是沒必要的。圖 8 顯示了下彎針的角度，這預設在 3-1/2 度。按照圖 F，可以增大或減小此角度，以影響上彎針尖端與下彎針後部之間的間隙。圖 7 顯示旋轉上彎針頭 (圖 G 或 H)。這維持了車針和上彎針之間的間隙，同時使上彎針的尖端更接近或更遠離下彎針。

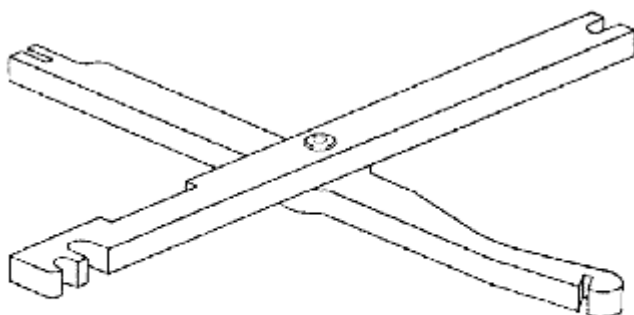
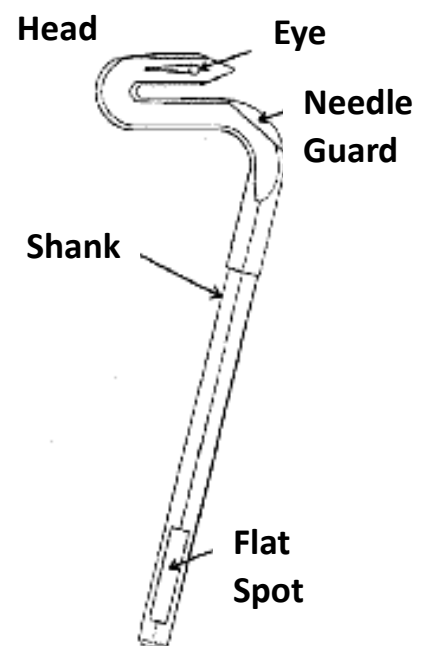
NEEDLE



UPPER LOOPERS

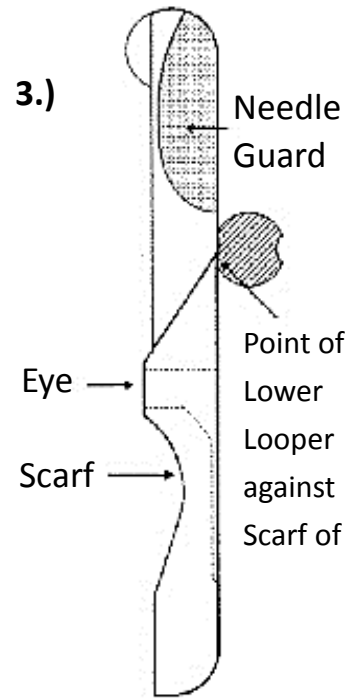
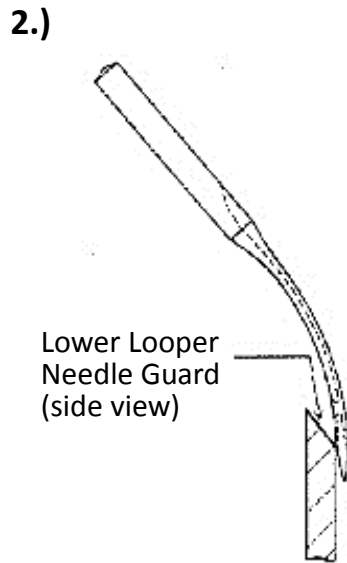
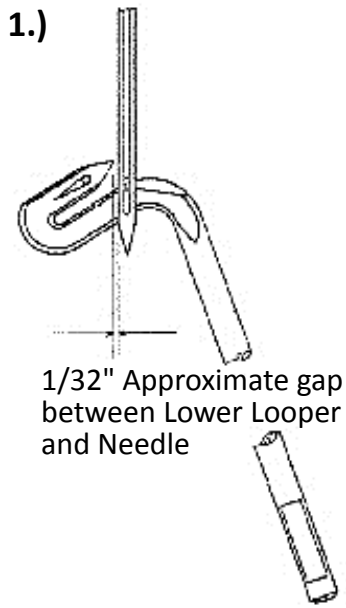


LOWER LOOPER

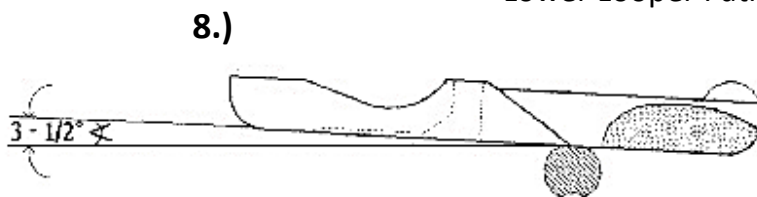
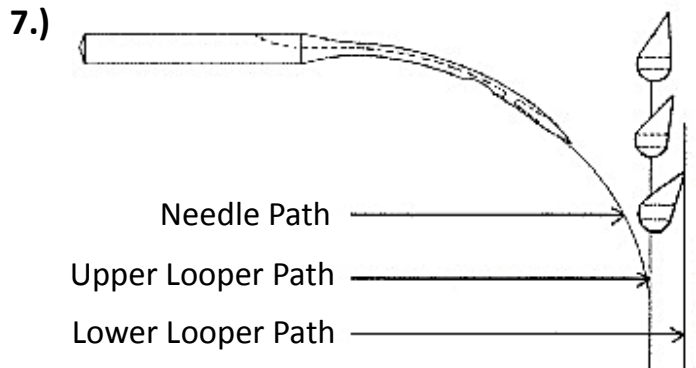
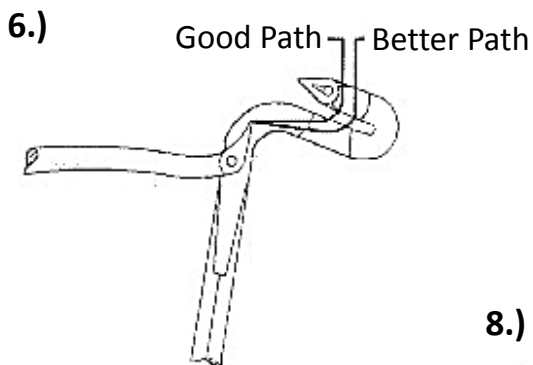
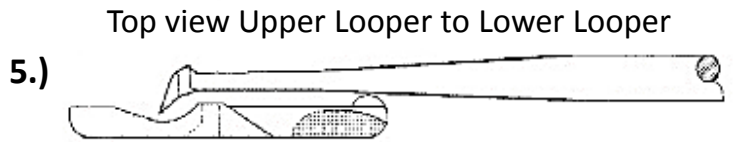
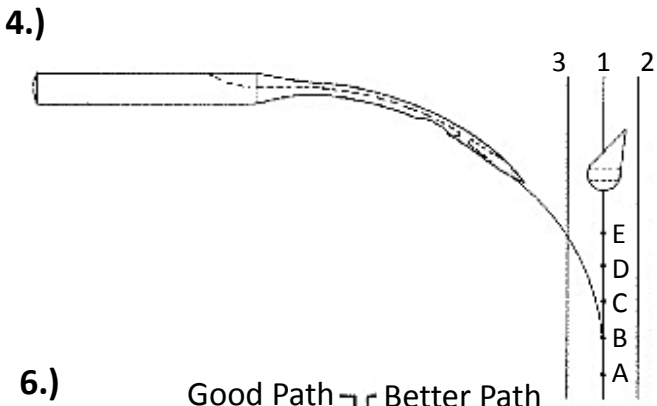


LOOPER BENDER L3010

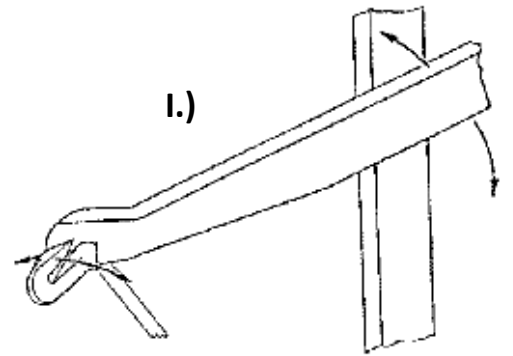
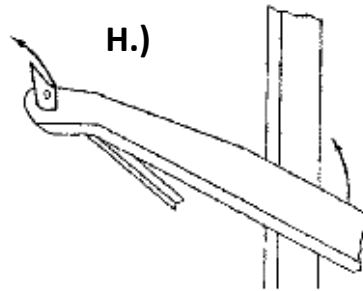
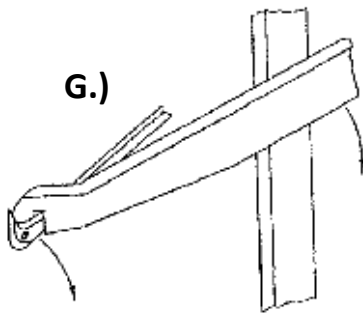
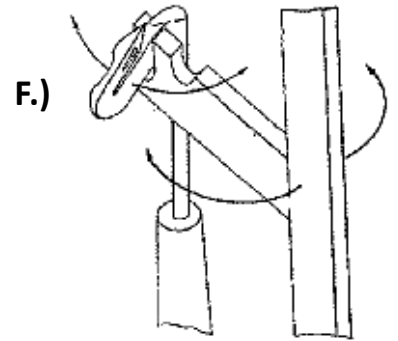
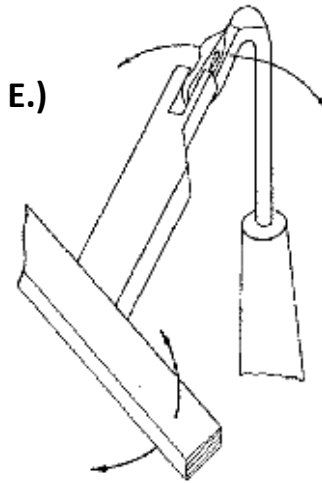
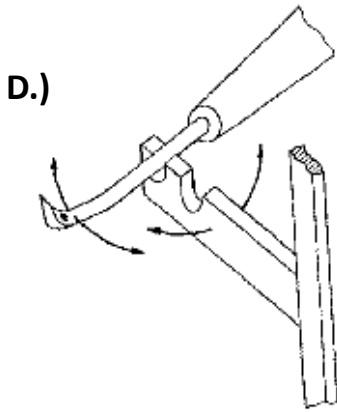
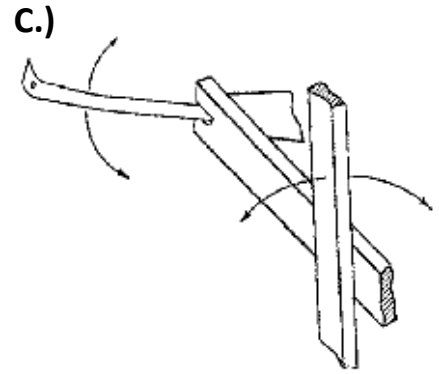
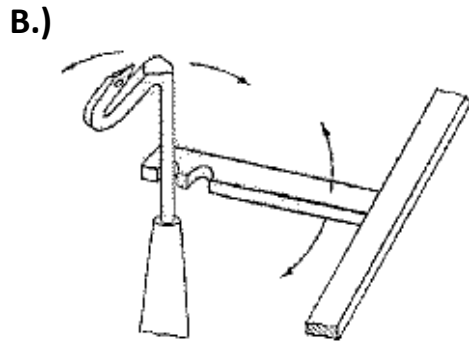
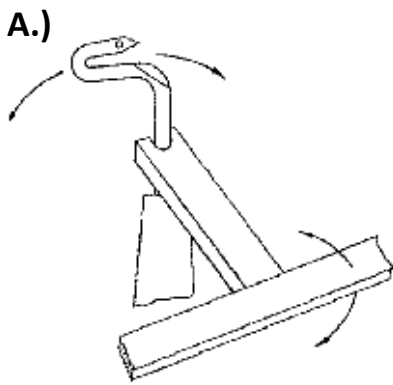
LOWER LOOPER SETTING DIAGRAM



UPPER LOOPER SETTING DIAGRAM



LOOPER BENDING DIAGRAM



- 1) To thread the machine, follow the threading diagram provided. (Note Section 1) When threading the Loper Threads, it is convenient to use a Threading Wire (37-318). Insert the thread or yarn into the eye of the Threading Wire, pass the Threading Wire through the Thread Eyes and Tension Discs as shown on the Threading Diagram. To thread the Lower Loper: Turn the Hand Wheel until the Needle is in its highest position to locate the Lower Loper's eye directly in line with the Lower Loper Thread Tube; pass the Threading Wire (with the Lower Loper Thread in its eye) through the Lower Loper Thread Tube, and the eye of the Lower Loper. Pull the Lower Loper Thread through to the top of the Needle Plate. To thread the Upper Loper: Keep the Needle in the same high position, turn the Hand Wheel to position if necessary. Bend the threading wire into a curve and thread its eye with the upper looper thread. Insert the threading wire into the tube in the Dust Shield (in some cases this tube is in the Frame Cap). The threading wire should come out above the Needle Plate and in front of the Upper Loper. Take the Upper Loper thread out of the threading wire, and thread through the eye of the Upper Loper. Care should be taken when threading the eye of the Upper Loper. Always make sure the thread is going directly from the tube to the eye of the looper, and NOT around the Loper.

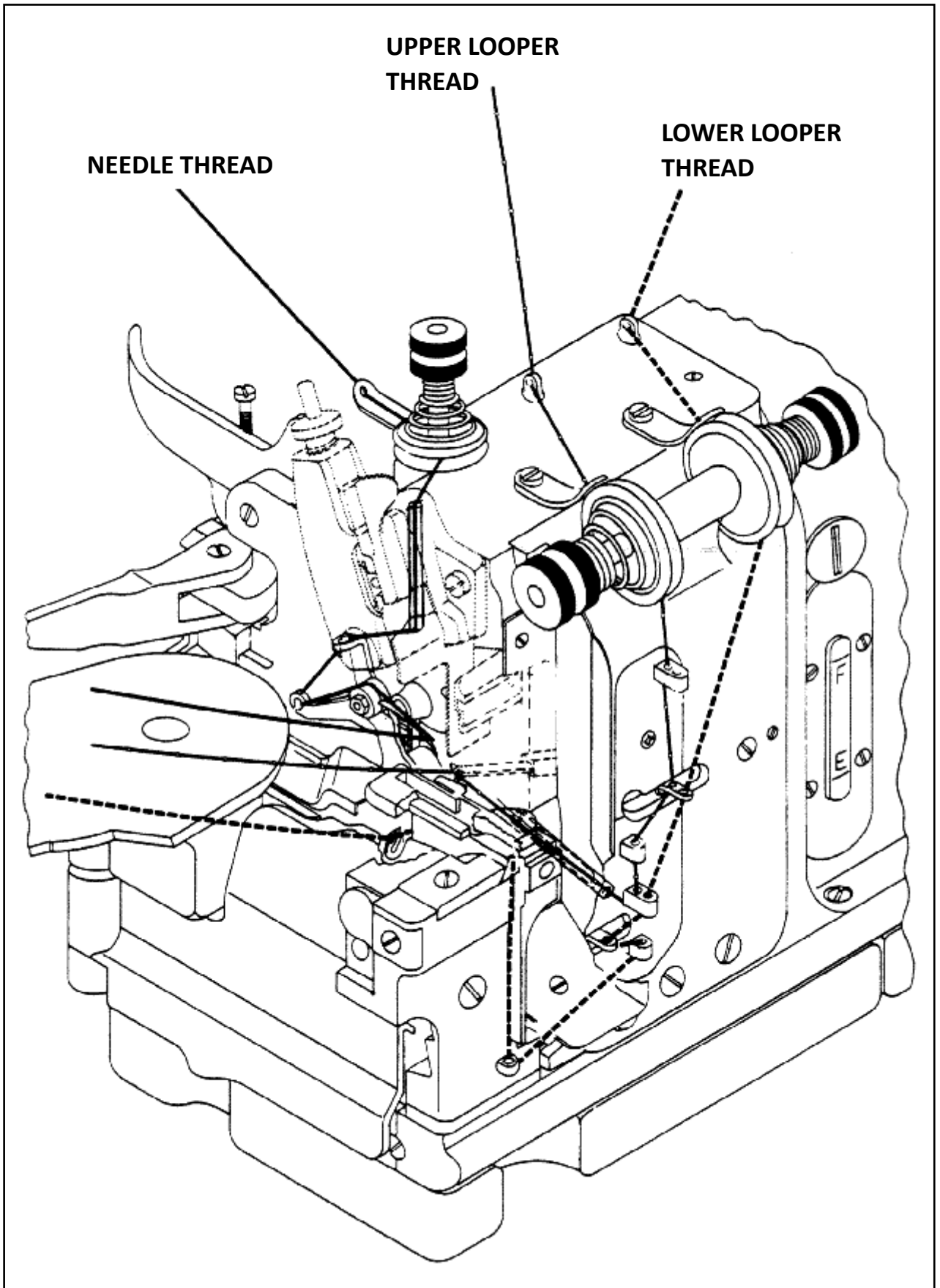
要為機器穿線，請按照提供的穿線圖進行操作。(注第 1 部分) 穿入彎針線時，使用穿線器 (37-318) 很方便。如穿線圖所示，將線插入穿線器的孔中，將穿線器穿過線眼和沙拉片。要穿入下彎針，請轉動手輪，直到針處於最高位置，以便將下彎針眼直接與穿線管對齊。將有穿過下彎針線的穿線器穿過線管和下彎針孔。將下彎針線拉到針板頂部。將下彎針線拉到針板頂部。要穿入上彎針，將針頭保持在同一個高位置，必要時將手輪轉動到位置。將穿線器彎曲成曲線，並將上彎針線穿過它的孔。將穿線器插入防塵蓋的管內 (某些情況下，此管位於前蓋內)。穿線器應從針板上方和上彎針前方出來。將上彎針線從穿線器取出，再穿過上彎針孔。穿上上彎針孔時應小心。務必確保線從穿線管直接進入彎針孔，而不是繞著彎針。

- 2) It is generally advisable to keep the tension on the threads as light as possible to produce good results. Always make sure the thread with the least tension is still controlled, then adjust the other tensions to balance and form the stitch you desire.

通常建議線上的張力盡可能調輕以產生良好的效果。始終確保仍然控制張力最小的線，然後調整其他張力以平衡並形成所需的線跡。

- 3) To change the stitch formation consult your nearest Distributor. It will be necessary to change the Threading Plates on the front of the machine, and in some cases the Needle Thread Take-up.

要更改縫法，請諮詢離您最近的益多利經銷商。有必要更換機器前面的過線板，有時還需要更換天坪。



CUTTER MECHANISM- UPPER AND LOWER CUTTER

切割機構 - 上刀和下刀

- 1) The Upper and Lower Cutter may be adjusted up and down and right to left. The standard setting would have them adjusted so that the fabric going into the stitch will be trimmed to the width of the Chaining Finger on the Needle Plate.

上下切刀可以上下左右調整。以標準設置調整上下刀，使進入針頭的織物將被修剪至針板上的押舌寬度。

- 2) The Lower Cutter Holder slides in the L.C.H. Support Assembly allowing right to left (lateral) movement of the Lower Cutter. Some Lower Cutter Holders have an internal spring to maintain pressure between the Upper and Lower Cutter. In some cases you may wish to fix the position of the Lower Cutter; to do this, tighten the screw L1863-16 at the desired position. Make sure you are only applying light pressure against the Upper Cutter.

下刀台在刀台座上滑動，使下刀右左(橫向)移動。一些下刀台有一個內部彈簧以保持上下刀之間的壓力。在某些情況下，您可能需要微調下刀的位置；為此，請在所需位置擰緊螺釘 L1863-16。確保你對上刀施加輕微的壓力。

- 3) The U.C.C. Thrust Block L181316 supports the force against the Upper Cutter Carrier by the cutters. After extended service it may be necessary to adjust this block by means of Adjusting Screw L1813-16 and the clamp screw L1553-16. There should be about 1 thousandth of an inch of clearance between the Thrust Block and the Upper Cutter Carrier.

L1813-16 90 度前蓋刀台支撐座對上刀台的張力。長時間使用後，可能需要通過調節螺釘 L1813-16 和夾緊螺釘 L1553-16 來調節該前蓋刀台支撐座。前蓋和上刀台之間應有大約千分之一英寸的間隙。

KNIFE ADJUSTMENT

調整切刀

- 4) Set the height of the Lower Cutter so that the cutting edge is slightly above the surface of the Needle Plate and tighten the Lower Cutter clamp nut L25-32. Make sure the height of the blade does not interfere with the Presser Foot.

設定下刀的高度，使刀鋒略高於針板表面，再擰緊下刀固定螺母 L25-32。確保刀片的高度不會影響壓腳。

- 5) Clamp the L.C. Holder to the width of trimming desired by screw L1863-16. Turn the Hand Wheel over until the upper cutter is in its lowest position of travel. At this position, the top of the cutting edge of the Upper Cutter should be even with the top of the Lower Cutter's cutting edge. This setting is obtained by adjusting the Upper Cutter Clamp Screw 37 or L1385-32 and the Upper Cutter Holder Clamp Screw L181-8.

用螺絲 L1863-16 將下刀台夾緊到所需的修邊寬度。轉動手輪，直到上刀處於其最低行程位置。在這個位置，上刀的刀鋒頂端應與下刀的刀鋒頂端平齊。該設置是通過調整上刀夾緊螺釘 37 或 L1385-32 和上刀夾緊螺釘 L181-8 獲得的。

- 6) Turn the Hand Wheel over again until the Upper Cutter is in its highest position of travel. The downward projection of the Upper Cutter must never travel above the height of the Lower Cutter. If it goes above the Lower Cutter, you must readjust the settings made in step 40 above to prevent the Upper Cutter from breaking the Lower Cutter.

再次轉動手輪，直到上刀處於其最高行程位置。上刀的向下突出決不能超過下刀的高度。如果它位於超過下刀的高度，則必須重新調整上述步驟 40 中的設置，以防止上刀破割壞下刀。

- 7) The two Cutters must remain in contact with each other in order to cut cleanly. Turn the Hand Wheel so the Upper Cutter is in its highest travel position, and loosen the L.C.H. Clamp Screw L1863-16. Press the Lower Cutter holder lightly to the right until contact is made with the Upper Cutter and tighten the L.C.H.C. Screw. Some machines have spring type supports like the one shown; on this support you only have to loosen the L.C.H.C. Screw, and the spring applies the pressure needed to cut. Do not allow the Lower Cutter to push too tightly against the Upper Cutter. If more than light pressure is required to make a clean cut, the blades are probably dull and should be sharpened on a Cutter Grinder.

兩個切刀必須保持接觸，以便切割乾淨。轉動手輪，使上刀處於其最高行程位置，然後鬆開下刀台固定螺絲 L1863-16。輕輕向右按壓下刀台，直至與上刀接觸並擰緊下刀台固定螺絲。有些機器具有如圖所示的彈簧式支架；在這種支撐上，只需鬆開下刀台固定螺絲，彈簧就可以施加切割所需的壓力。不要讓下刀推得太緊以抵住上刀。如果要進行乾淨的切割需要的壓力較大，刀片可能會變鈍，應使用磨刀機進行磨削。

FEEDING MECHANISM 送料機構

FEED DOGS 狗齒

- 1) Feed Dogs are normally provided with either coarse or fine cut teeth, single row or double row, depending on the material you are sewing. Generally, the Feed Dogs should be set as low as practical to allow the work to feed. The length of feed can be changed by removing the Feed Eccentric and substituting an eccentric of shorter or longer stroke. Feed Eccentrics L68228-# are marked to indicate approximately the number of stitches per inch produced at the edge of the fabric.

根據您縫製的材料，狗齒通常是粗牙或細牙，單排或雙排。一般來說，狗齒設置應盡可能低，以使布料送入機器。進給長度可通過更換較短或較長衝程的粗細珠來改變。粗細珠 L68228-# 上標誌著在織物邊緣產生的大約每英寸針數。

- 2) The Feed Dog and Needle Plate must match each other and it may be necessary to change Feed Dogs to prevent interference with the Needle Plate when very few stitches per inch are used.

狗齒和針板必須相互匹配，當使用每英寸針數很少時，可能需要更換狗齒以防止碰撞針板。

- 3) Some machine contain a differential feed. The differential feed contains two separate Feed Dogs, with separate Feed Carriers and separate Feed Eccentrics. This separation allows the front Feed Dog to be set up to travel farther than the rear Feed Dog. This gathers the fabric and prevents it from being stretched or lengthened while it is being sewn. The difference in the throw of the two Feed Eccentrics creates the "differential" feed. The difference between the two can be very little or quite large depending on the number of stitches per inch you desire and on the elasticity (stretch) of the fabric.

有些機型具有差動進料機構。差動進料包含兩個獨立狗齒，並含有獨立狗齒台和獨立粗細珠。這個設置使得前面的狗齒比後面的狗齒跑得更遠。這會聚攏布料，防止它在縫製時被拉伸或拉長。兩個粗細珠的差異造成了“差動”進料。兩者之間的差異可能很小或很大，具體取決於您所需的每英寸針數以及織物的彈性（拉伸）。

- 4) On certain fabrics it may be desirable to tilt the Feed Mechanism. To make this adjustment loosen the Set Screw L1485-32, then slowly turn the Feed Carrier Block Pin to the desired location and tighten the set screw. When the screw slot in the F.C. Block Pin is level with the base of the machine, the feed dogs will be in their standard position. It is never necessary to remove the Set Screw L1485-32.

在某些織物上，可能需要傾斜進料機構。為了進行這種調整，請鬆開固定螺絲 L1485-32，然後慢慢地將狗齒台軸心轉到所需位置並擰緊固定螺絲。當軸心中的螺絲槽與機器基座齊平時，狗齒將處於其標準位置。而不需要拆下固定螺釘 L1485-32。

PRESSER FOOT AND PRESSER FOOT FINGER

押腳及押舌

- 5) The center hinged type Presser Foot is generally used since it is convenient for seaming or edging where seams or thick and thin places must be crossed. Rigid and rear hinged type Presser Foot are available for special purposes. After lifting the Presser Foot Latch, the Presser Foot Arm with its Presser Foot may be swung out to provide access to the Needle and Loopers.

通常使用活動式押腳，使它穿過厚薄的地方時方便縫製或包邊處理。固定式押腳可用於特殊用途。抬起押勾後，可以將押腳柄及其押腳旋出，以用於更換針和彎針。

- 6) Ordinarily, use as little pressure on the Presser Foot as possible. This pressure is adjustable by the Screw L163-8-A. A set Nut L163-8-AN holds Screw L163-8-A in position so your adjustment does not change while the machine is running.

通常，押腳的壓力必須盡可能調低。押腳的壓力可由調整螺絲 L163-8-A 來改變。固定螺母 L163-8-AN 將螺絲 L163-8-A 固定到位，以便在機器運轉時您的調節不會改變。

MACHINE MAINTENANCE 機器維護

LUBRICATION 潤滑

- 1) General: The lubrication system is entirely automatic, feeding oil to all bearing surfaces without the use of wicks. The path of the oil as it circulates through the machine is described as follows: Two Oil Pump Plungers are operated from eccentric grooves in the main shafts. The upper shaft pump draws oil from the main reservoir and forces it through the Oil Bubbler Pipe to the Oil Bubbler Pipe Cap. The oil then drains down through holes to the Upper Shaft Oil Collector and the correct amount of oil is fed into the Upper Shaft Assembly. Inside the Upper Shaft the oil is distributed through several successive oil holes and grooves to the bearing surfaces of the main shafts on the left end of the machine, the Needle Carrier Assembly, the Upper Cutter Carrier Assembly, and the Feed Mechanism. Some of the oil not fed into the Upper Shaft is forced along the outside of the Upper Shaft, down the face of the Cam Boss, and through holes in the Main Cams to lubricate the Cam Rolls and the Frame Cap bearings. The Needle Bearing for the Lower Shaft is oiled from the overflow oil from the lower shaft pump. All the oil in the machine drains down through the Oil Filter into the Oil Filter Support and is pumped from this support by the lower shaft pump back into the oil reservoir.

一般情況：潤滑系統是全自動的，無需使用油線即可將油輸送到所有軸承表面。機油在機器中循環的路徑描述如下：兩個送油心由主軸偏心槽操作。上軸泵從主油箱中抽出油，並將其通過油管送到油蓋。然後油通過孔向下排放到上軸集油器中，並將正確數量的油輸送到上軸主軸中。在上軸內部，油通過幾個連續的油孔和凹槽分佈到機器左端主軸的軸承表面，針柱組，上刀台組和送料機構。未送入上軸的一些油被迫沿著上軸的外側，凸輪的表面以及主凸輪上的孔，以潤滑凸輪和前蓋培林。從下軸泵溢出的油會潤滑下軸的培林。機器中的所有機油通過濾油器排入油盤，並通過下軸泵將該機油從油盤泵送回油箱。

- 2) Oil is filled through a hole under the Cap Screw of the Oil Filler Assembly into the main reservoir. About 8 ounces of a high grade turbine oil is recommended. To drain the oil, remove the machine from the Machine Mounting Assembly and extend the hand wheel end of the machine over the end of the table. After providing a means of catching the oil, unscrew the Oil Drain Screw L1113-8 several turns.

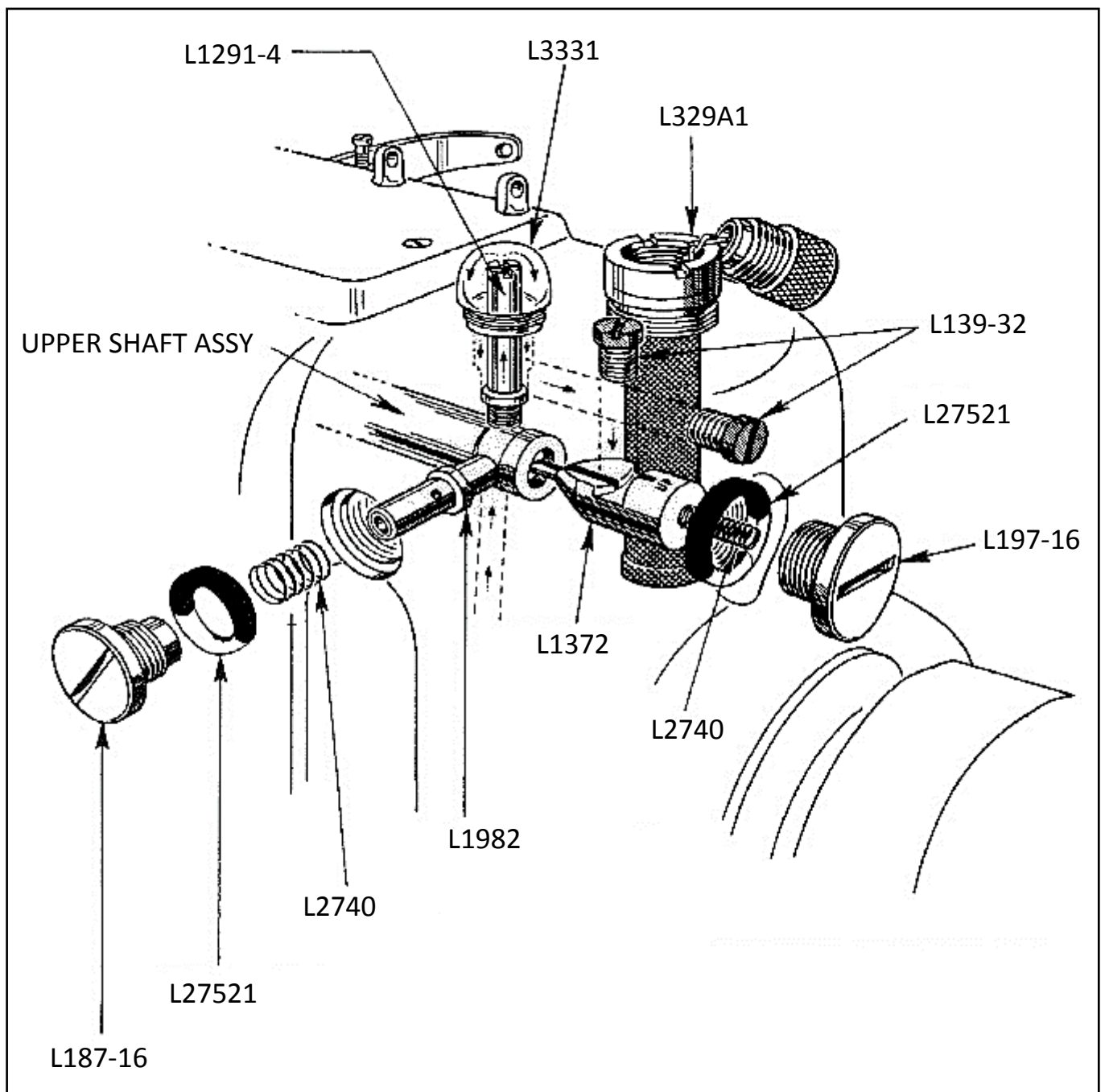
油通過濾油器螺絲下方的一個孔注入油盤。建議使用約 8 盎司的高級渦輪機油。要排出機油，請將機器從機器底盤取下，並將機器的手輪延伸到工作台的末端。擺好收集油的底盤後，鬆開排油螺絲 L1113-8 幾圈。

3) The following precautions are recommended:

- (A) Never allow the oil level to go below the "E" line on the Oil Gage.
- (B) Occasionally clean the lint around the Feed Dogs and from behind the Dust Shield and Upper Fabric Guard. (Do Not Use Compressed Air)
- (C) Daily clean the lint from the drain slots around the L.C. Holder Support Assembly.
- (D) Clean the Oil Filter about once a year (See Below). Replace filter after four cleanings.
- (E) Clean screen on the Oil Filler Assembly if filling the machine becomes difficult (See Below).

建議採取以下預防措施：

- (A) 絕對不要讓油位低於油量計上的“E”線。
- (B) 偶爾清理狗齒周圍的棉絨以及防塵蓋和上護蓋後面的棉絨。(不要使用壓縮空氣)
- (C) 每日清理下刀台周圍排屑槽的絨毛
- (D) 每年洗清濾油器一次(參見下文)。四次清理後更換過濾器
- (E) 如果灌油變得困難，請清理灌油器上的油網(請參閱下文)



- 4) To clean the Oil Filter remove the three screws (L1833-16B) in the Oil Filter Support and lift the machine from this support; remove the Oil Filter and clean with compressed air or solvent. When using compressed air to clean the filter, blow the air in the reverse direction of the oil flow - from bottom to the top of the Oil Filter. For best results remove and replace the three gaskets on the Oil Filter Support. (O.F. Gasket L2752, O.F.S. Gasket L2751, and O.F.S. Line Gasket L2753) Carefully locate the new gaskets in their proper positions, and install the cleaned filter (flat side down). Lower the machine straight down onto the Oil Filter Support Assembly, being careful not to disturb the alignment of the gaskets. Install and tighten the three screws (L1833-16B)

要清濾油器，請拆下濾油器油盤的三個螺絲 (L1833-16B)，然後將機器從此油盤上提起；取下濾油器並用壓縮空氣或溶劑清潔。使用壓縮空氣清潔濾油器時，請往油流的相反方向，從濾油器底部到頂部吹氣。為獲得最佳效果，請卸下並更換濾油器上的三個墊圈 (L2752、L2751 和 L2753)仔細將新墊片放在適當的位置，並安裝乾淨的濾油器(平面朝下)。將機器直接向下放到濾油器油盤上，小心不要弄亂墊片的排列。安裝並擰緊三個螺絲(L1833-16B)。

- 5) To clean the screen on the Oil Filler Assembly: unscrew the entire assembly from the machine, remove the cap screw, and clean the filler screen with compressed air or solvent

清潔注油器組件上的油網：從機器上擰下整個組件，取下螺釘，然後用壓縮空氣或溶劑清潔濾油器油網。

TROUBLESHOOTING 疑難排解

BREAKING NEEDLES 斷針

- 1) Incorrect Needle – Try a larger Needle. Needles are available in sizes from #000 to #8. The larger the number the bigger the Needle.

不正確的針 - 嘗試更大的針，針的尺寸為 # 000 到 # 8。針數越大，針越大。

- 2) Needle Carrier Stud is Loose – The Needle Carrier Assembly must be free to swing upon the Stud, but must not have any right to left lateral movement.

To adjust the Stud (L149-32), loosen the set screw (L187-32). Tighten the Needle Carrier Stud (L149-32) until it stops, then back it out 1/12 of a turn (30 degrees) and re-tighten the Screw (L187-32).

針柱栓鬆動 - 針柱組必須完全自由地在螺栓上擺動，但不能從右向左橫向移動

要調整螺栓(L149-32)，鬆開固定螺絲(L187-32)。擰緊針柱組螺栓(L149-32)直至其停止，然後將其迴轉 1/12 圈 30 度，再擰緊固定螺絲(L187-32)。

- 3) Check the Looper Setting – Check that the Needle is not impacting or bending when it passes the loopers.

檢查彎針設置 - 確保車針在通過彎針時不會受到影響或彎曲。

- 4) Needle Carrier Stud Hole is Worn – If a customer finds that he or she is continually readjusting the Needle Carrier, it is a good indication that the Needle Carrier Stud hole is worn out. The machine should be shipped to the INDERLE factory for service. (If step 2 is not followed, the Needle Carrier Stud hole can wear out easily.)

針柱組螺栓孔已磨損 - 如果客戶發現他正不斷調整針柱組，則表明針柱組螺栓孔已磨損。機器應該運送到益多利工廠進行維修。如果不按照(2)步驟，則針柱組螺栓孔易磨損。

FEEDING PROBLEMS 送布問題

- 1) Check Cutter Sharpness – Place a single strand of thread between the two blades. Turn the Handwheel by hand, and see if the thread is cut cleanly. If the thread is not cut cleanly, adjust, sharpen, or replace the Cutters.

檢查刀具鋒利度 - 在兩個刀片之間放置一根線。用手轉動手輪，看看線是否被切割乾淨。如果線未被切割乾淨，請調整，銳化或更換刀具。

- 2) Feed Dogs Set too Low – The Feed Dogs should be set so that the bottom point of the Feed Dog is even with the top of the Needle Plate when the Feed Dogs are at their highest point of travel.
狗齒設置太低 - 當狗齒處於其最高行程時，狗齒的齒底必須與針板的頂部平齊。
- 3) Too Little Presser Foot Pressure – Loosen the lock nut L163-8-AN, and turn the adjustment screw L163-8 clockwise a few turns. Retighten the lock nut.
押腳壓力太小 - 鬆開鎖定螺母 L163-8-AN，然後順時針旋轉調節螺絲 L163-8-A 幾圈。重新擰緊鎖緊螺母。
- 4) Feed Dogs Worn – The points on the Feed Dog teeth are no longer sharp. They appear shiny and polished over. Replace the worn part.
狗齒磨損 - 狗齒上的齒不再尖銳。它們看起來有光澤並且平鈍了。更換磨損的零件。
- 5) Presser Foot Worn – The Presser Foot has channels or railroad-like tracks worn into its bottom surface. Replace the worn part.
押腳磨損 - 壓腳底部有類似鐵路軌道的磨損痕跡。更換磨損的零件。
- 6) Feed Dog Tilt – On certain fabrics it may be desirable to tilt the Feed Mechanism.
狗齒傾斜 - 在某些織物上，可能需要傾斜進料機構。

STITCH QUALITY 縫製品質

Holes in Fabric / Needle Tears 織物被針刺破很多洞

- 1) Replace Needle – Loosen the nut two turns. Remove the old Needle and replace it with a new Needle. Set the new Needle all the way back against the Stop Pin, and retighten the nut.
更換針 - 鬆開螺母兩圈。取出舊針，並用新針替換。將新針頭設置在最後方靠近止動銷，然後重新擰緊螺母。
- 2) Incorrect Needle –
 - (A) Try a smaller Needle. Needles are available in sizes from #000 to #8. The larger the number the bigger the needle.
 - (B) Try a Ball Point Needle. INDERLE's designation for Ball Point is "F".

不正確的車針

- (A) 嘗試使用較小的針。針的尺寸從 # 000 到 # 8。針數越大，針越大。
- (B) 嘗試使用圓頭針。益多利指定圓頭為 "F"

RAGGED EDGE (Fabric looks chopped, not cut) 邊緣不平 (織物看起來被切碎，不是被切割)

Check Cutter Sharpness – Place a single strand of thread between the two blades. Turn the Handwheel by hand, and see if the thread is cut cleanly. If the thread is not cut cleanly, adjust, sharpen, or replace the Cutters.

檢查刀具鋒利度 - 在兩個刀片之間放置一根線。用手轉動手輪，看看線是否被切割乾淨。如果線未切割乾淨，請調整，銳化或更換刀具。

POOR COVERAGE ON EDGE 邊緣覆蓋率差

- 1) Increase the Stitch Count – Increase the number of stitches per inch by replacing the Feed Eccentrics (stitch cams). Use Eccentrics with a higher number. The number on the Stitch Cam represents the approximate number of stitches per inch.
增加針數 - 通過更換粗細珠來增加每英寸的針數。使用更高數字的粗細珠。粗細針珠上的數字代表每英寸的大概針數。

2) Use Additional Thread –

(A) Use a heavier thread as the coverage thread

(B) On certain styles it is common to use more than one Cover Thread. IDL-30 is an example of this approach.

使用額外的紗線 –

(A) 使用較粗的紗線作為包邊紗線

(B) 在某些樣式中，通常使用多條包邊紗線。IDL-30 就是這種方法的一個例子。

LOOSE STITCH 針跡鬆脫

1) Check the Threading – Refer to the Threading Diagram provided with the machine, and ensure that the threading is proper.

檢查過線 – 請參閱機器隨附的穿線圖，並確保穿線正確。

2) Increase Tension of the Thread – Turning the Tension Adjustment Nut clockwise to increase the tension. The standard setting is considered to be lock nuts on all tensions approximately even with the ends of the Tension Studs.

增加線的張力 - 順時針轉動紗拉組螺母以增加張力。標準設置為所有紗拉組上的鎖緊螺母與紗拉組軸心的末端大致平齊。

EDGE CURLING WITH STITCH – TOO MUCH FABRIC IN STITCH 邊緣捲曲/針距布料過多

1) Decrease Tension of Thread – Determine which thread is breaking, and decrease the tension on that thread. Turning the Tension Adjustment Nut counterclockwise decreases the tensions. The standard setting is Lock Nuts on all tensions approximately even with the ends of the Tension Studs.

減少紗線張力 - 確定哪個紗線斷裂，並減小該紗線的張力。逆時針轉動紗拉組調節螺母會減小張力。標準設置為所有紗拉組上的鎖緊螺母與紗拉組軸心的末端大致平齊。

2) Adjust Cutters – Move the Cutters to the left to reduce the amount of fabric in the stitch. (Refer to the Cutter Instructions) 調整切刀 - 向左移動刀具以減少針包縫的寬度。(請參見切刀說明)

SCRATCH ON FABRIC – FEED DOG TRACKING ON FABRIC 布面有狗齒痕跡

1) Check for Burrs / Sharp Edges 檢查毛刺 / 銳角

A. Check the Feed Dogs, and remove any burrs encountered.

檢查狗齒，並去除任何毛刺。

B. Check for sharp edges on the Feed Dog Slot(s) of the Needle Plate. Buff the sharp edges until smooth.

檢查針板狗齒槽上的銳角。拋光銳角直至光滑。

2) Too Much Presser Foot Pressure – Loosen the Lock Screw, and turn the Adjustment Screw counterclockwise a few turns. Retighten the Lock Screw.

押腳壓力太大 - 鬆開固定螺絲，逆時針旋轉調節螺絲幾圈。重新擰緊螺絲。

3) Feed Dogs Set too High – The Feed Dogs should be set so that the bottom point of the Feed Dog Tooth is even with the top of the Needle Plate when the Feed Dogs are at their highest point of travel.

狗齒設置太高 - 正確設置應設成當狗齒處於最高水平時，狗齒底部與針板頂部平齊。

4) Wrong Feed Dogs – 狗齒不正確

A. Fine tooth feeds should be used with light fabric.

細狗齒應使用於輕微的布料。

B. Urethane feeds should be used with delicate fabric.

塑膠狗齒應使用於精緻的布料。

OIL PROBLEMS 機油問題

OIL ON FABRIC 布料上有油

- 1) Use the Proper Oil – Check to ensure that the proper grade or weight of oil is being used.
使用正確的油 - 檢查以確保使用適當等級或重量的油。
- 2) Clean the Machine – Check for and remove any lint or debris from around the Needle Carrier and Fabric Guard. Lint accumulating around the sewing area may become saturated with oil.
清洗機器 - 檢查並清理針柱和護布蓋周圍的任何絨毛或碎屑。在縫紉區域周圍積聚的棉絨可能會吸滿油。

OIL ON TABLE 桌板上有油

- 1) Use the Proper Oil – Check to ensure that the proper grade or weight of oil is being used.
使用合適的機油 - 檢查以確保正使用合適的機油等級或重量。
- 2) Clean the Machine – Remove any lint that has accumulated behind the Dust Shield and around the Feeds.
清潔機器 - 清除防塵罩後面和狗齒周圍累積的絨毛。
- 3) Replace the Oil Filter and Gaskets – If the oil filter is clogged with lint, it should be replaced. The Gaskets should be replaced at the same time.
更換濾油器和墊圈 - 如果濾油器被棉絨堵塞，應該更換，並同時更換墊圈。
- 4) Replace the Lower Pump – If the lower pump is not working the oil being delivered to the machine will not be returned to the reservoir. Replace the Oil Pump Plunger L1982, and the Oil Pump Plunger Spring L2740. The Lower Pump is located in the rear of the machine behind a 3/4 inch diameter screw.
更換下泵 - 如果下泵不運作，輸送到機器的油不會返回到油盤。更換送油心 L1982 和彈簧 L2740。下泵位於機器後部，直徑 3/4 英寸的螺桿後面

NO BUBBLER FLOW 噴油柱沒有氣泡流動

- 1) Replace the Upper Pump – If the Upper Pump is not working the oil is not being delivered to the machine. If one continues to run the machine in this condition, parts will burn and seize. Replace the Oil Pump Plunger L1982 and the Oil Pump Plunger Spring L2740. The Upper Pump is located in the front of the machine behind a 3/4 inch diameter screw.
更換打油器 - 如果打油器不運作，機油不會被輸送到機器。如果在這種情況下繼續運行機器，則零件會被磨壞而卡住。更換送油心 L1982 和彈簧 L2740。上泵位於機器前部，直徑為 3/4 英寸的螺絲。

SKIPPED STITCHES 跳針

- 1) Replace Needle – Loosen the nut two turns. Remove the old Needle and replace it with a new Needle. Set the new needle all the way back against the Stop Pin, and retighten the nut.
更換針 - 鬆開螺母兩圈。取出舊針，並用新針替換。將新針頭設置在最後方靠近止動銷，然後重新擰緊螺母。
- 2) Check the Threading – Refer to the Threading Diagram provided with the machine, and ensure that the threading is proper.
檢查過線 - 參考機器附帶的穿線圖，並確保穿線是正確。

- 3) Check Cutter Sharpness – Place a single strand of thread between the two blades. Turn the Handwheel by hand, and see if the thread is cut cleanly. If the thread is not cut cleanly, adjust, sharpen, or replace the Cutters.

檢查刀具鋒利度 - 在兩個刀片之間放置一根線。用手轉動手輪，看看線是否被切割乾淨。如果線未被切割乾淨，請調整，銳化或更換刀具。

- 4) Check the Looper Setting – Referring to the illustrations and descriptions provided help to pin point the problem with the Looper Setting.

檢查彎針設置 - 參考圖和說明可幫指出彎針設置的問題

THREAD BREAKING 斷線

- 1) Replace Needle – Loosen the nut two turns. Remove the old Needle and replace it with a new Needle. Set the new Needle all the way back against the Stop Pin, and retighten the nut.

更換針 - 鬆開螺母兩圈。取出舊針，並用新針替換。將新針頭設置在最後方靠近止動銷，然後重新擰緊螺母。

- 2) Check the Threading – 檢查穿線

A) Refer to the Threading Diagram provided with the machine, and ensure that the threading is proper.

參考機器附帶的穿線圖，並確保穿線是正確

B) Make sure the thread is coming off the spools freely without getting wrapped around the Thread Stand.

確保線自由地脫離線架而不纏繞線架。

- 3) Check for Burrs / Sharp Edges – 檢查毛刺 / 銳角

A) Determine which thread is breaking, and check for any sharp edges along its path of travel. Remove any burrs encountered, and buff the part smooth.

確定哪條線斷裂，並檢查沿其行進路線的任何尖銳邊緣。去除所看到的毛刺，並且拋光部件。

B) Check the Loopers for burrs. Remove any burrs and buff the Looper smooth. Take care not to dull the point in the process.

檢查彎針的毛刺。去除任何毛刺，並且拋光彎針。注意不要磨鈍彎針尖。

- 4) Decrease Tension of Thread – Determine which thread is breaking, and decrease the tension on that thread. Turning the Tension Adjustment Nut counterclockwise decreases the tension. The standard setting is considered to be lock nuts on all tensions approximately even with the ends of the Tension Studs.

減少線張力 - 確定哪個線斷裂，並降低線的張力。逆時針轉動紗拉組調整螺母減小張力。標準設置為所有紗拉組上的鎖緊螺母與紗拉組軸心的末端大致平齊。

- 5) Problem with the Thread – 紗線問題

A) The thread might be brittle from a dyeing process or from age. Try another cone of thread from another lot if possible.

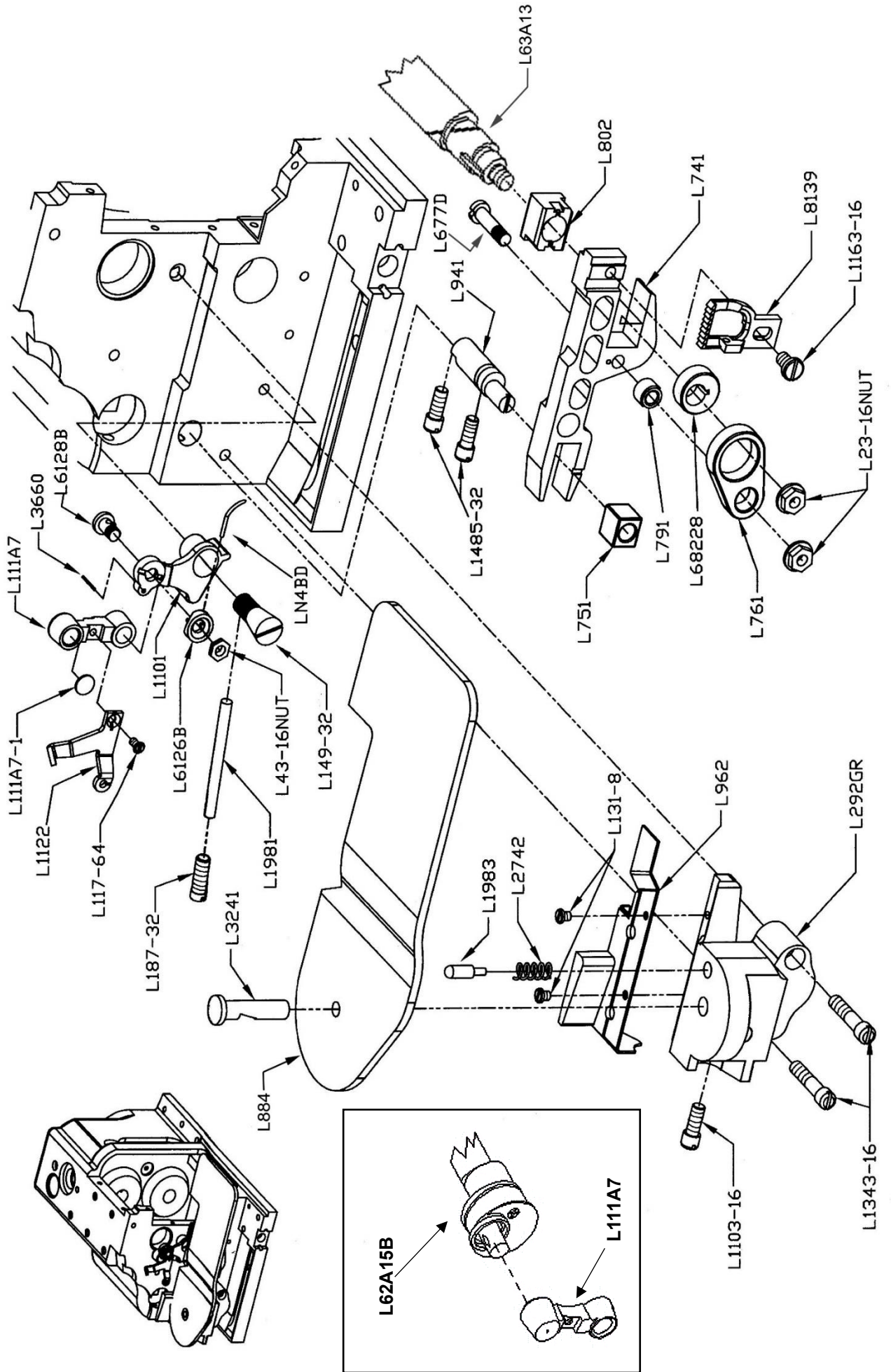
線可能因染色過程或氧化變脆。如可以，試著使用另一批紗線。

B) The thread might be too light a size / length for the application.

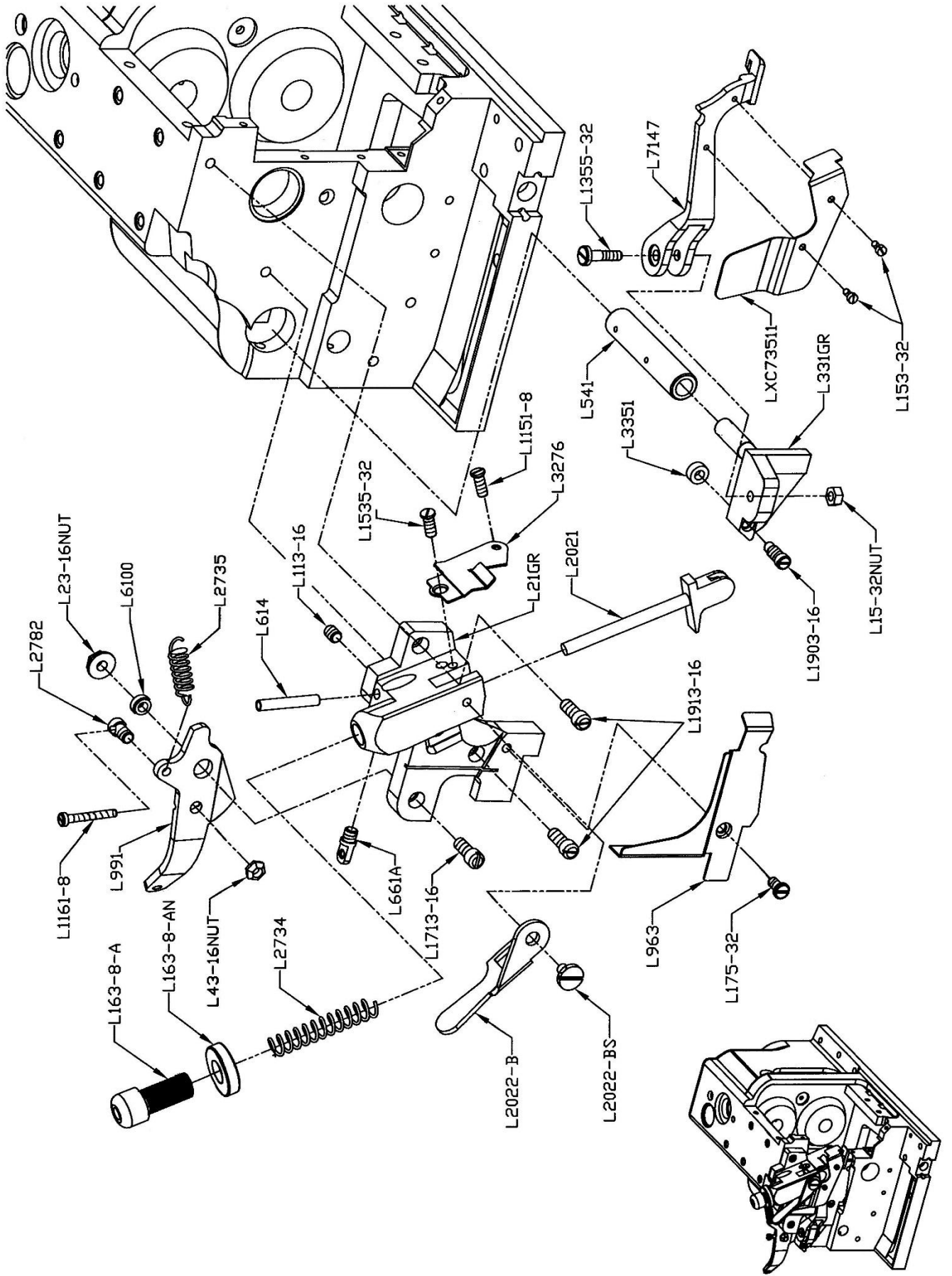
紗線可能太細而無法使用

- 6) Check the Looper Setting – Refer to the Looper Setting Instructions

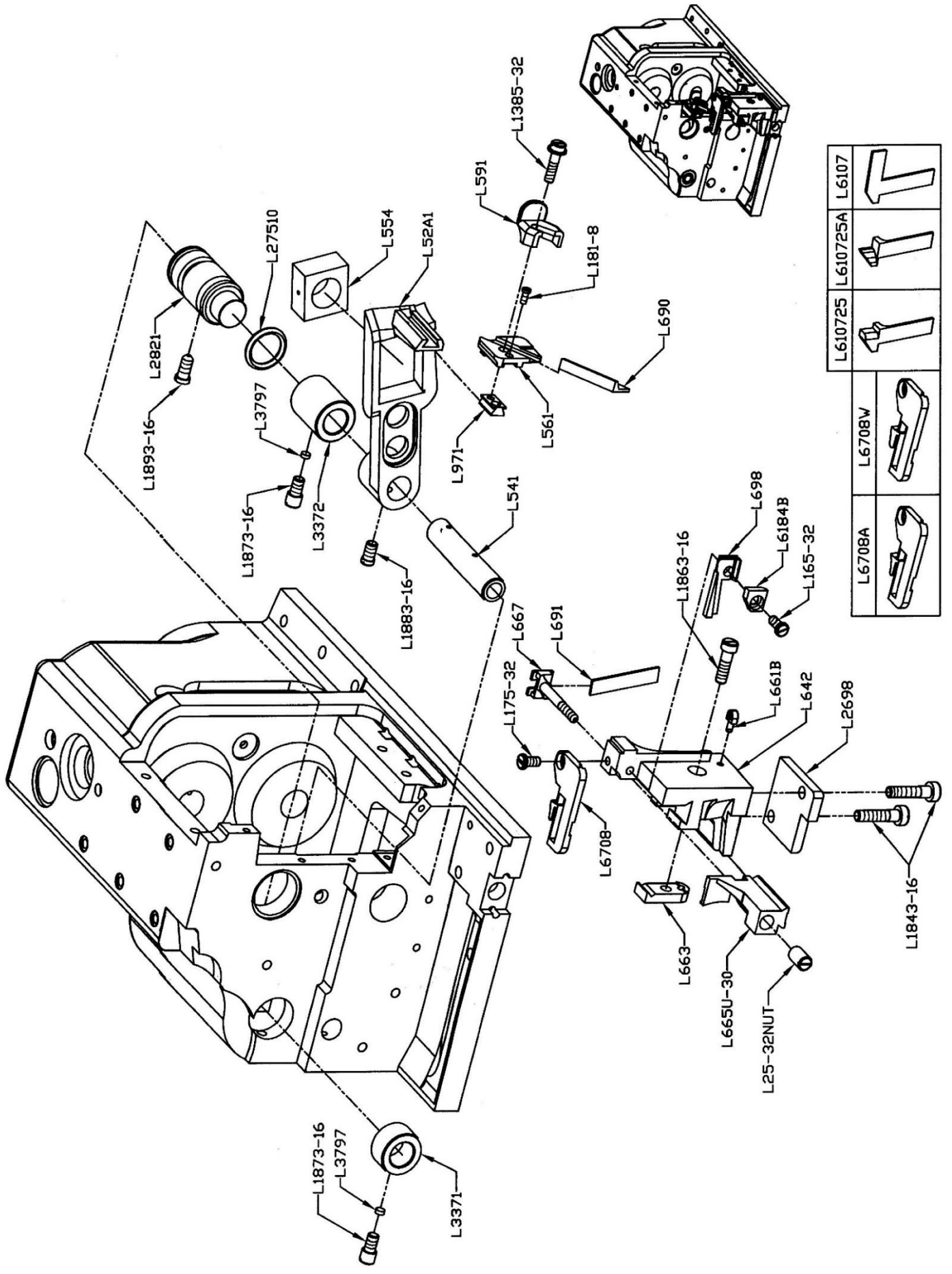
檢查彎針設置 - 請參見彎針設置說明



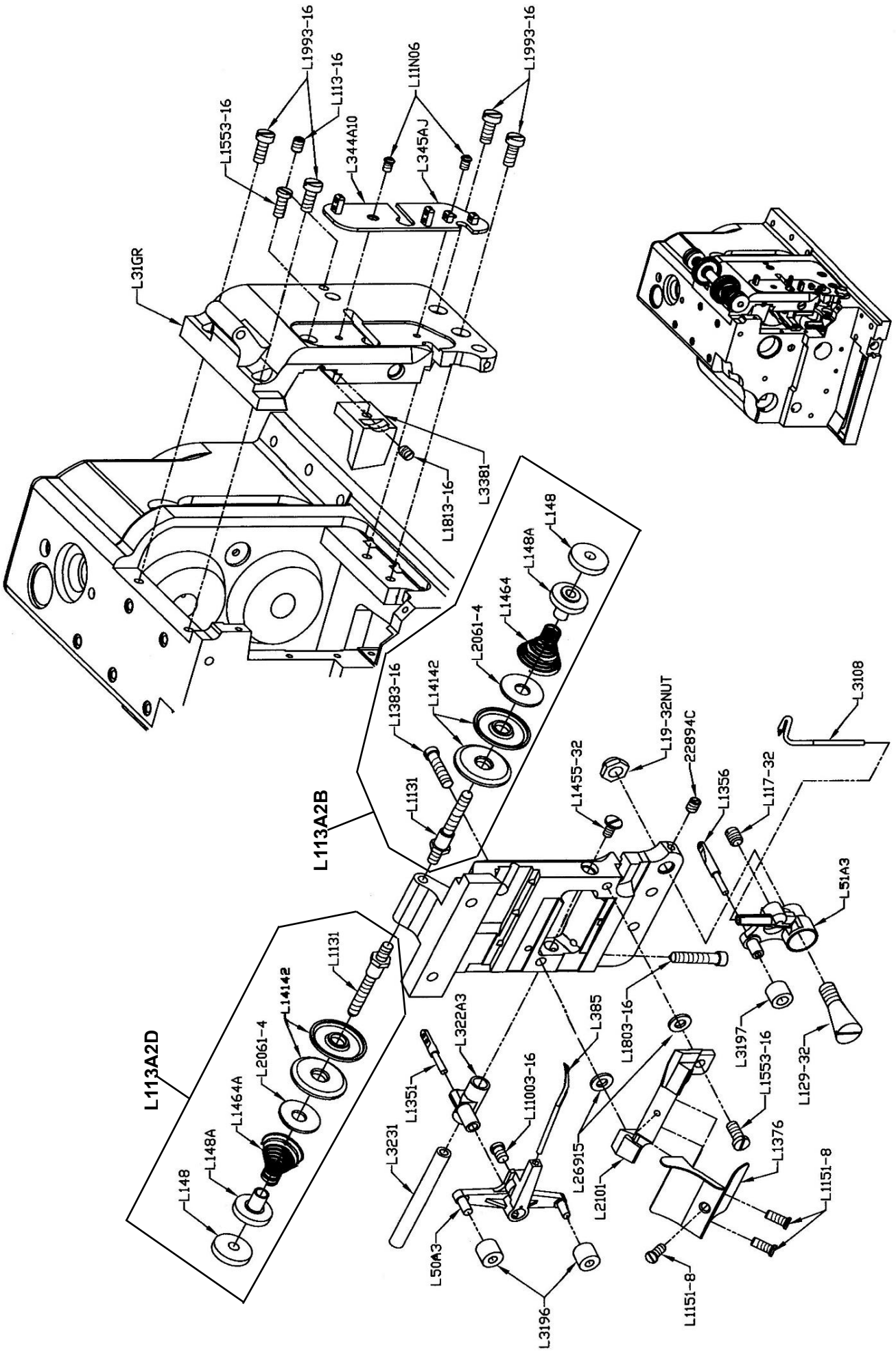
| REF NO. | PART NO. 型號 | DESCRIPTION 品名 |
|---------|-------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | L1101 | NEEDLE BAR 針柱 |
| 2 | L1103-16 | SCREW 螺絲 |
| 3 | L111A7 | LINK 連桿(針柱) |
| 4 | L111A7-1 | LINK COVER PLATE 連桿圓蓋(針柱) |
| 5 | L1122 | NEEDLE THREAD TAKEUP 天秤過線 |
| 6 | L1163-16 | SCREW 螺絲(狗齒) |
| 7 | L117-64 | SCREW 螺絲 |
| 8 | L131-8 | SCREW 螺絲 |
| 9 | L1343-16 | SCREW 螺絲 |
| 10 | L1485-32 | SCREW 螺絲 |
| 11 | L149-32 | NEEDLE CARRIER STUD SCREW 螺絲(針柱) |
| 12 | L187-32 | SCREW 螺絲 |
| 13 | L1981 | PLUNGER 送油心 |
| 14 | L1983 | PLUNGER 送油心 |
| 15 | L23-16NUT | NUT 螺母 |
| 16 | L2742 | SPRING 彈簧(針板座) |
| 17 | L292GR | WORK PLATE SUPPORT 針板外蓋座 |
| 18 | L3241 | WORK PLATE 軸心(針板蓋) |
| 19 | L3660 | PIN 樁心(針柱) |
| 20 | L43-16NUT | NUT 螺母 |
| 21 | L6126B | COLLAR 押針片 |
| 22 | L6128B | NEEDLE CARRIER BOLT 針留 |
| 23 | L677D | BOLT 螺栓 短 |
| 24 | L741 | FEED BAR 狗齒台 |
| 25 | L751 | FEED CARRIER BLOCK 四角珠(狗齒台) |
| 26 | L761 | FEED CARRIER LINK (REAR) 珠台 小 |
| 27 | L791 | BUSHING 圓珠 |
| 28 | L802 | FEED RAISING ECCENTRIC BLOCK 四角珠(狗齒台) |
| 29 | L8139 | FEEDER 狗齒 |
| 30 | L844 | WORK PLATE 針板蓋 |
| 31 | L941 | BLOCK PIN 軸心 |
| 32 | L962 | COVER 防塵蓋 |
| 33 | LN4BD | NEEDLE TLX1#16 車針 |
| 34 | L68228-# | FEED ECCENTRIC #4, #6, #7, #8, #10, #12, #14, #16, #18, #20, #22, #24, #26, #28, #30, #32, #36, #40, #50, #60, #70, #90 粗細針珠 |



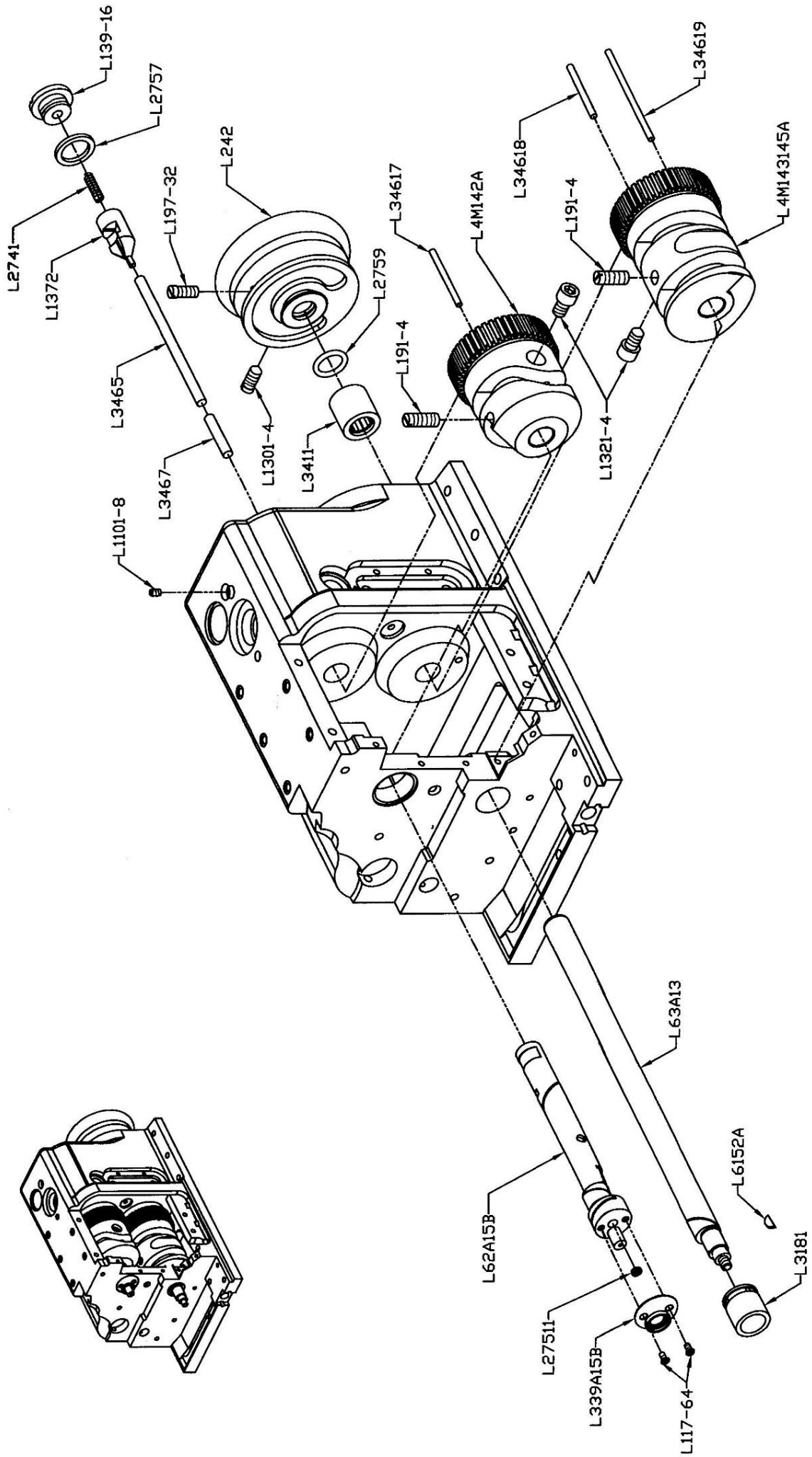
| REF NO. | PART NO. 型號 | DESCRIPTION 品名 |
|---------|-------------|-----------------------------------|
| 1 | L1151-8 | SCREW 螺絲 |
| 2 | L1161-8 | SCREW 螺絲 |
| 3 | L3276 | HEAD CAP EXTENSION 護蓋 |
| 4 | L113-16 | SCREW 螺絲(狗齒) |
| 5 | L1355-32 | SCREW 螺絲 |
| 6 | L15-32NUT | NUT 螺母 |
| 7 | L153-32 | SCREW 螺絲 |
| 8 | L1535-32 | SCREW 螺絲 |
| 9 | L163-8-A | SCREW 押上止 |
| 10 | L163-8-AN | PRESSER REGULATING THUMB SCREW 螺帽 |
| 11 | L1713-16 | SCREW 螺絲 |
| 12 | L175-32 | SCREW 螺絲(針板) |
| 13 | L1903-16 | SCREW 螺絲 |
| 14 | L1913-16 | SCREW 螺絲 |
| 15 | L2021 | PRESSER BAR 押柱 |
| 16 | L2022-B | HAND LIFT LEVER 拉起 |
| 17 | L2022-BS | SCREW 螺絲(拉起) |
| 18 | L23-16NUT | NUT 螺母 |
| 19 | L2734 | PRESSER FOOT SPRING 彈簧(押柱) |
| 20 | L2735 | SPRING 彈簧(押勾) |
| 21 | L2782 | SCREW 螺絲 |
| 22 | L331GR | PRESSER ARM PIVOT 押腳柄座 |
| 23 | L3351 | ROLL 套襯 |
| 24 | L43-16NUT | NUT 螺母 |
| 25 | L541 | STUD 套管(上刀台) |
| 26 | L6100 | PRESSER FOOT LIFT BUSHING 套管(押勾) |
| 27 | L614 | THREAD GUIDE 線管 |
| 28 | L661A | THREAD GUIDE 過線(單孔) |
| 29 | L7147 | PRESSER FOOT 押腳 |
| 30 | L963 | UPPER FABRIC GUARD 護蓋(上) |
| 31 | LXC73511 | PROTECTION PLATE 護片 |
| 32 | L991 | PRESSER FOOT LIFT STOP CLAMP 押勾 |
| 33 | L21GR | PRESSER ARM HOUSING 押上座 |



| REF NO. | PART NO. 型號 | DESCRIPTION 品名 |
|---------|-------------|------------------------------------------|
| 1 | L1385-32 | SCREW 螺絲 |
| 2 | L165-32 | SCREW 螺絲 |
| 3 | L175-32 | SCREW 螺絲(針板) |
| 4 | L1843-16 | SCREW 螺絲(下刀台座) |
| 5 | L1863-16 | SCREW 螺絲(刀台) |
| 6 | L1873-16 | SCREW 螺絲 |
| 7 | L1883-16 | SCREW 螺絲 |
| 8 | L25-32NUT | NUT 螺母 |
| 9 | L2698 | LOWER CUTTER HOLDER SUPPORT SHIM 墊片(下刀台) |
| 10 | L27510 | O-RING 護油圈 |
| 11 | L2821 | PLUG 護蓋 |
| 12 | L3371 | BUSHING 套管 |
| 13 | L3372 | BUSHING 套管 |
| 14 | L3797 | WASHER 墊片 |
| 15 | L52A1 | UPPER CUTTER CARRIER 刀台(上) |
| 16 | L541 | STUD 套管(上刀台) |
| 17 | L554 | BLOCK 四角珠 |
| 18 | L561 | UPPER LOOPER HOLDER 上刀台 |
| 19 | L591 | UPPER KNIFE CLAMP 上刀夾 |
| 20 | L6107 | GUIDE 檔邊 特殊 |
| 21 | L610725 | GUIDE 檔邊 標準 |
| 22 | L610725A | GUIDE 檔邊 特殊 |
| 23 | L6184B | THREAD TUBE CLAMP 押鐵 |
| 24 | L642 | LOWER CUTTER HOLDER SUPPORT 下刀台座 |
| 25 | L661B | THREAD EYELET 過線(單孔) 無牙 |
| 26 | L663 | CLAMP 束仔 |
| 27 | L665U-30 | LOWE KNIFE HOLDER 下刀台 |
| 28 | L667 | LOWER CUTTER CLAMP 下刀台 |
| 29 | L6708 | NEEDLE PLATE 針板 |
| 30 | L6708A | NEEDLE PLATE 針板 特殊 |
| 31 | L6708W | NEEDLE PLATE (WIDE) 針板 寬舌 |
| 32 | L690 | UPPER KNIFE 上刀 |
| 33 | L691 | LOWER KNIFE 下刀 |
| 34 | L698 | LOOPER THREAD TUBE 線導管(彎針) |
| 35 | L971 | UPPER CUTTER HOLDER 上刀台滑塊 |
| 36 | L1893-16 | SCREW 螺絲 |
| 37 | L181-8 | SCREW 螺絲 |

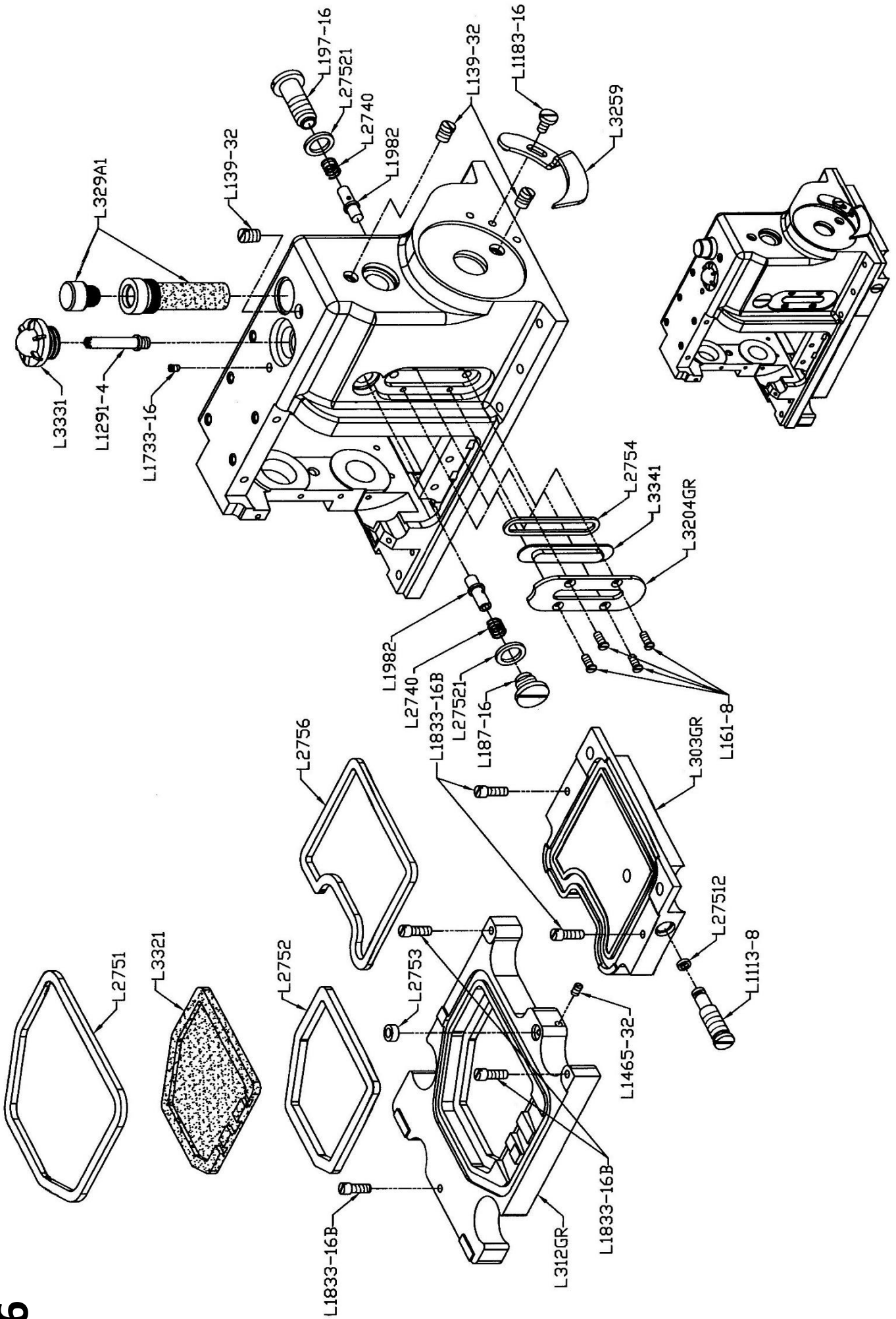


| REF NO. | PART NO. 型號 | DESCRIPTION 品名 |
|---------|-------------|--------------------------------------|
| 1 | 22894C | SCREW 螺絲 |
| 2 | L11003-16 | SCREW 螺絲 |
| 3 | L1131 | TENSION POST 沙拉心 |
| 4 | L113-16 | SCREW 螺絲 |
| 5 | L113A2B | THREAD TENSION SET 沙拉組 (中) |
| 6 | L113A2D | THREAD TENSION SET 沙拉組 (強) |
| 7 | L1151-8 | SCREW 螺絲 |
| 8 | L117-32 | SCREW 螺絲(彎針台) 下 |
| 9 | L11N06 | SCREW 螺絲 |
| 10 | L129-32 | STUD 螺栓(彎針台) 下 |
| 11 | L1351 | THREAD GUIDE 過線(雙孔) |
| 12 | L1356 | THREAD GUIDE 過線(單孔) |
| 13 | L1376 | OIL COLLECTOR 護油片 |
| 14 | L1383-16 | SCREW 螺絲 |
| 15 | L14142 | TENSION DISC 沙拉片 |
| 16 | L1455-32 | SCREW 螺絲 |
| 17 | L1464 | TENSION SPRING 彈簧(沙拉組) 中 |
| 18 | L1464A | TENSION SPRING 彈簧(沙拉組) 強 |
| 19 | L148 | NUT 螺母(沙拉組) |
| 20 | L148A | NUT 螺母(沙拉組) |
| 21 | L1553-16 | SCREW 螺絲(三叉台) |
| 22 | L1803-16 | SCREW 螺絲 |
| 23 | L1813-16 | SCREW 螺絲 |
| 24 | L19-32NUT | NUT 螺母 |
| 25 | L1993-16 | SCREW 螺絲(面板蓋) |
| 26 | L2061-4 | DISC FELT 沙拉棉 |
| 27 | L2101 | GUIDE 押彎針台座 |
| 28 | L26915 | GUIDE SHIM 墊片(三叉) |
| 29 | L3108 | LOWER LOOPER 下彎針 |
| 30 | L3196 | CAM ROLL 圓珠 |
| 31 | L3197 | CAM ROLL 圓珠 |
| 32 | L31GR | FRAME CAP 前面板蓋 |
| 33 | L322A3 | SLIDE 過線座(滑動) |
| 34 | L3231 | SLIDE ROD 軸心 |
| 35 | L3381 | U.C.C. THRUST BLOCK 90度(前蓋) |
| 36 | L344A10 | UPPER THREADING PLATES 過線(上線板) 1種-2孔 |
| 37 | L345AJ | LOWER THREADING PLATES 過線(下線板) 3種-4孔 |
| 38 | L385 | UPPER LOOPER 彎針 |
| 39 | L50A3 | UPPER LOOPER CARRIER ASSY 彎針台(三叉) |
| 40 | L51A3 | LOWER LOOPER CARRIER ASSY 彎針台 下 |

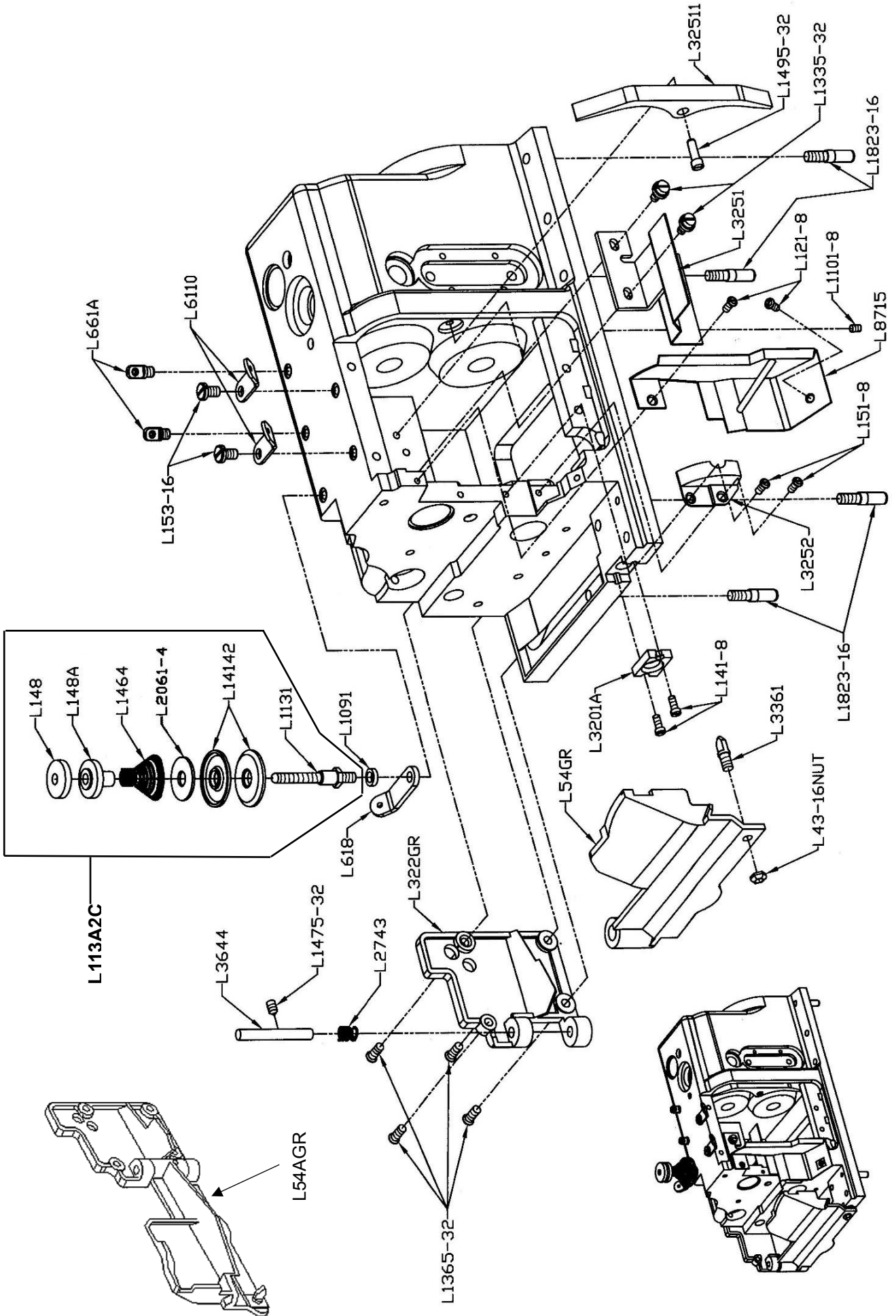


| REF NO. | PART NO. 型號 | DESCRIPTION 品名 |
|---------|-------------|-------------------------|
| 1 | L1101-8 | SCREW 底座擋油螺絲 |
| 2 | L117-64 | SCREW 螺絲 |
| 3 | L1301-4 | SCREW 螺絲(浦力) 尖 |
| 4 | L1321-4 | SCREW 螺絲(凸輪) |
| 5 | L1372 | OIL COLLECTOR 收油器 |
| 6 | L139-16 | SCREW 螺絲 |
| 7 | L191-4 | SCREW 凸輪止 |
| 8 | L197-32 | SCREW 螺絲(浦力) |
| 9 | L242 | PULLEY 皮帶輪 |
| 10 | L2741 | SPRING 彈簧(右油孔) |
| 11 | L27511 | O-RING 護油圈 |
| 12 | L2757 | GASKET 護油圈 |
| 13 | L2759 | GASKET 護油圈 |
| 14 | L3181 | LOWER BUSHING 套管 下 |
| 15 | L339A15B | UPPER SHAFT FLANGE 檔油圓片 |
| 16 | L3411 | BEARING 培林 |
| 17 | L34617 | PIN 檔油心(凸輪) |
| 18 | L34618 | PIN 檔油心(凸輪) |
| 19 | L34619 | PIN 檔油心(凸輪) |
| 20 | L3465 | PLUNGER 油溝心 長 |
| 21 | L3467 | OIL DISTRIBUTOR ROD 油溝心 |
| 22 | L4M142A | UPPER CAM 凸輪 |
| 23 | L4M143145A | LOWER CAM 凸輪 |
| 24 | L6152A | FEED ECCENTRIC KEY 半月型 |
| 25 | L62A15B | UPPER MAIN SHAFT 上大心 |
| 26 | L63A13 | LOWER MAIN SHAFT 大心 |

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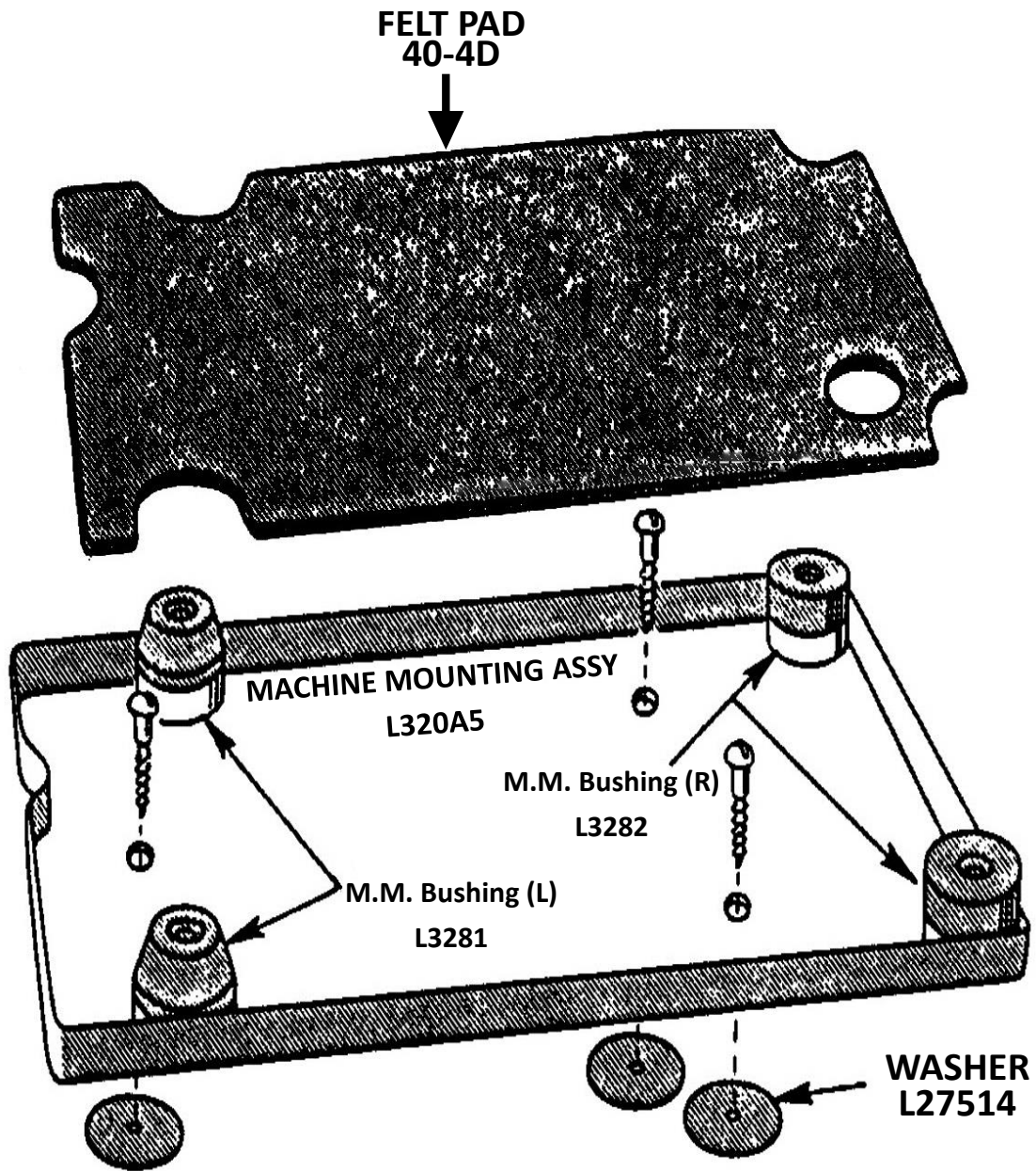


| REF NO. | PART NO. 型號 | DESCRIPTION 品名 |
|---------|-------------|--------------------------|
| 1 | L1113-8 | SCREW 螺絲 |
| 2 | L1183-16 | SCREW 螺絲 |
| 3 | L1291-4 | OIL BUBBLER PIPE 噴油柱 |
| 4 | L139-32 | SCREW 螺絲 |
| 5 | L1465-32 | SCREW 螺絲 |
| 6 | L161-8 | SCREW 螺絲 |
| 7 | L1733-16 | SCREW 螺絲 |
| 8 | L1833-16B | SCREW 螺絲 |
| 9 | L187-16 | SCREW 螺絲 |
| 10 | L197-16 | SCREW 螺絲 |
| 11 | L1982 | OIL PUMP PLUNGER 送油心 |
| 12 | L2740 | SPRING 彈簧(前油孔) |
| 13 | L2751 | GASKET 墊片 |
| 14 | L27512 | O-RING 護油圈 |
| 15 | L2752 | GASKET 墊片 |
| 16 | L27521 | GASKET 墊片 |
| 17 | L2753 | LINE GASKET 墊片 |
| 18 | L2754 | OIL GAGE GASKET 墊片 |
| 19 | L2756 | GASKET 墊片 |
| 20 | L303GR | BASE (RIGHT) 油盤(右) |
| 21 | L312GR | BASE (LEFT) 油盤(左) |
| 22 | L3204GR | OIL SIGHT COVER 油蓋(前) |
| 23 | L3259 | HAND WHEEL GUARD 護蓋(皮帶輪) |
| 24 | L329A1 | OIL FILTER ASSY 濾油組 |
| 25 | L3321 | OIL FILTER 濾油網 |
| 26 | L3331 | OIL BUBBLER CAP 油鏡(上) |
| 27 | L3341 | OIL GAGE 油鏡 |



| REF NO. | PART NO. 型號 | DESCRIPTION 品名 |
|---------|-------------|----------------------------------|
| 1 | L1091 | BUSHING FOR TENSION POST 套頭(沙拉心) |
| 2 | L1101-8 | SCREW 底座擋油螺絲 |
| 3 | L1131 | TENSION POST 沙拉心 |
| 4 | L113A2C | THREAD TENSION SET 沙拉組 (中) |
| 5 | L121-8 | SCREW 螺絲 |
| 6 | L1335-32 | SCREW 螺絲 |
| 7 | L1365-32 | SCREW 螺絲 |
| 8 | L14142 | TENSION DISC 沙拉片 |
| 9 | L141-8 | SCREW 螺絲 |
| 10 | L1464 | TENSION SPRING 彈簧(沙拉組) 中 |
| 11 | L1475-32 | SCREW 螺絲 |
| 12 | L148 | NUT 螺母(沙拉組) |
| 13 | L148A | NUT 螺母(沙拉組) |
| 14 | L1495-32 | SCREW 螺絲 |
| 15 | L151-8 | SCREW 螺絲 |
| 16 | L153-16 | SCREW 螺絲 |
| 17 | L1823-16 | SCREW 螺絲(四角) |
| 18 | L2061-4 | DISC FELT 沙拉棉 |
| 19 | L2743 | SPRING 彈簧(左蓋) |
| 20 | L3201A | F.C. CATCH PLATE 固定座 |
| 21 | L322GR | CLOTH PLATE (LEFT) 邊蓋(左) |
| 22 | L3251 | CAM CAVITY GUARD 護蓋 |
| 23 | L32511 | ANGLED COVER 凸輪防塵蓋 |
| 24 | L3252 | CAM END GUARD 護蓋 |
| 25 | L3361 | FACE COVER CATCH 邊蓋止 |
| 26 | L3644 | PIN 軸心(左邊蓋) |
| 27 | L43-16NUT | NUT 螺母 |
| 28 | L54GR | FEED COVER (RIGHT) 邊蓋(右) |
| 29 | L6110 | THREAD GUIDE 過線 |
| 30 | L618 | THREAD GUIDE 過線 |
| 31 | L661A | THREAD EYELET 過線(單孔) |
| 32 | L8715 | DUST SHIELD 保護蓋(前) |

MACHINE BASE



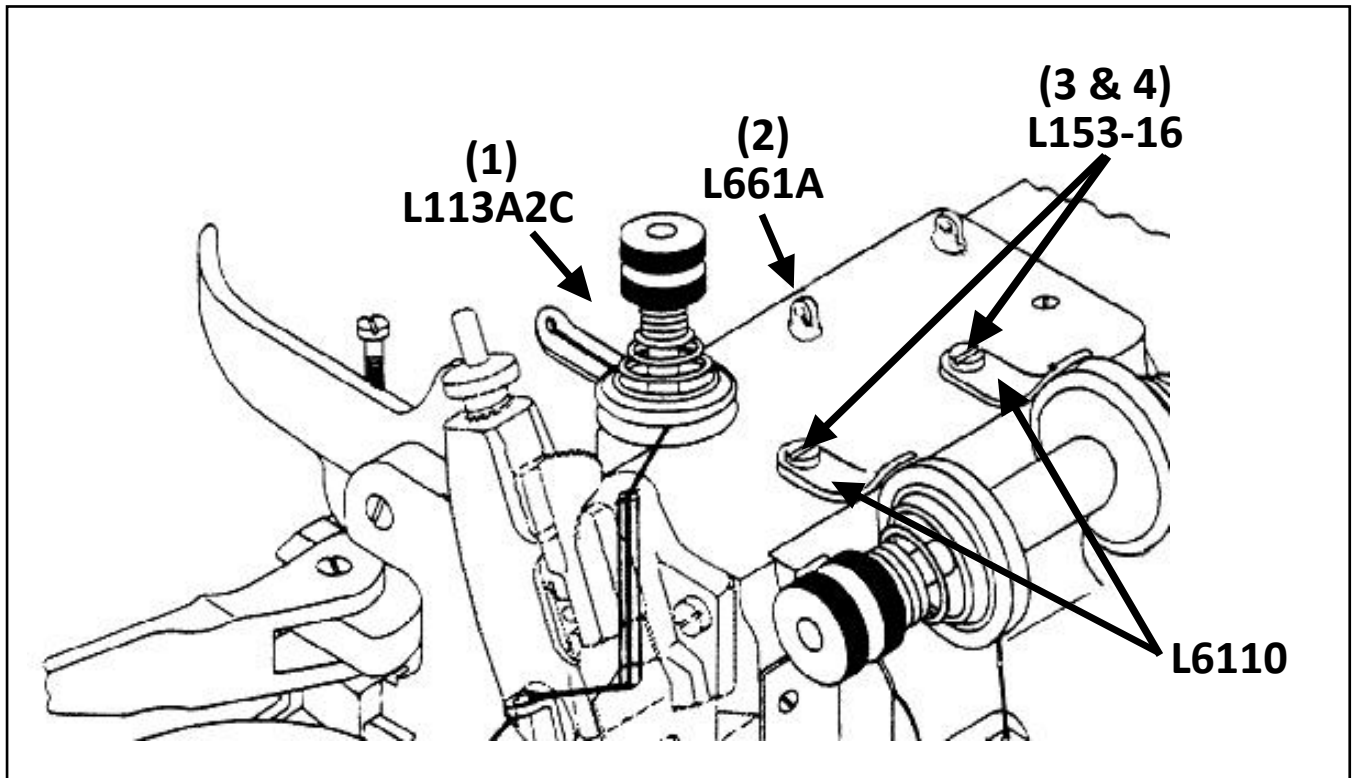
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| L1122 | 1 | 5 | L148A | 4 | 17 | L21GR | 2 | 33 |
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| L113A2C | 7 | 4 | L153-32 | 2 | 7 | L2735 | 2 | 20 |
| L113A2D | 4 | 6 | L15-32NUT | 2 | 6 | L2740 | 6 | 12 |
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| L1151-8 | 4 | 5 | L1553-16 | 4 | 18 | L2742 | 1 | 16 |
| L1161-8 | 2 | 2 | L161-8 | 6 | 6 | L2743 | 7 | 18 |
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| L117-64 | 1 | 7 | L165-32 | 3 | 2 | L27511 | 5 | 11 |
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| L11N06 | 4 | 7 | L175-32 | 2 | 12 | L27521 | 6 | 16 |
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| L1291-4 | 6 | 3 | L1803-16 | 4 | 19 | L2754 | 6 | 18 |
| L129-32 | 4 | 8 | L1813-16 | 4 | 20 | L2756 | 6 | 19 |
| L1301-4 | 5 | 3 | L181-8 | 3 | 37 | L2757 | 5 | 12 |
| L131-8 | 1 | 8 | L1823-16 | 7 | 16 | L2759 | 5 | 13 |
| L1321-4 | 5 | 4 | L1833-16B | 6 | 8 | L2782 | 2 | 21 |
| L1335-32 | 7 | 5 | L1843-16 | 3 | 4 | L2821 | 3 | 11 |
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| L1351 | 4 | 9 | L187-16 | 6 | 9 | L303GR | 6 | 20 |
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| L1356 | 4 | 10 | L187-32 | 1 | 12 | L312GR | 6 | 21 |
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| L3411 | 5 | 16 | L661B | 3 | 25 | | | |
| L344A10 | 4 | 33 | L663 | 3 | 26 | | | |
| L345AJ | 4 | 34 | L665U | 3 | 27 | | | |
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| L3467 | 5 | 21 | L677D | 1 | 23 | | | |
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COMPASS ATTACHMENT 圓規圍繞器整組

INSTALL INSTRUCTIONS 安裝說明

1. LOOSE PART L113A2C SET (1) AND L661A (2)
鬆開 沙拉組 L113A2C SET (1) 和 過線 L661A (2)
2. UNSCREW L153-16 AND REMOVE THREAD GUIDE L6110 (3, 4)
鬆開 2 個螺絲 L153-16 (3、4) 再取出 過線 L6110
3. INSTALL IDL-30C ROD HOLDER PLATE L30C010 ON 4 HOLES (SEE DIAGRAM BELOW).
在 4 個孔上安裝定位器機頭固定板 L30C010 (見下圖)



- BEFORE INSTALLING THE HOLDER PLATE L30C010 ON MACHINE, TIGHTEN SCREW L30C012 THROUGH HOLDER PLATE L30C010 AND CONNECTION ROD HOLDER L30C009 (SEE DIAGRAM BELOW).
在機器上安裝固定板 L30C010 之前，通過固定板 L30C010 和連接桿固定器 L30C009 擰緊螺釘 L30C012 (見下圖)。
- REPLACE STANDARD THREAD EYELET L661A WITH LONG TYPE THREAD EYELET L619 AND ADD WASHER L1091.
用長牙過線 L619 和墊片 L1091 替換標準過線 L661A
- REPLACE STANDARD SCREW L153-16 (2 PCS) WITH LONG TYPE SCREW L1183-16.
用 2 顆長型螺絲 L1183-16 替換標準螺絲 L153-16
- REPLACE STANDARD WORK PLATE L844 WITH WORK PLATE L30C011 (SEE PART LIST PAGE 1)
用 L30C011 替換標準針板蓋 L844 (見零件圖 第一頁)

SPARE PARTS DIAGRAM 零件圖

